The Builder.

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Ancient and Modern Furniture.

THE collection of articles included under the general term "Furniture at the Kensington Museum," has only somewhat recently become so numerous and important as to be regarded as a special department. The authorities have, however, since the acquisition of the Soulages collection of cabinets, chairs, &c., commenced a more systematic illustration of furniture and carved woodwork, and can now show the student or visitor a series of specimens which, if not, as they admit, quite a representative collection, affords examples of many of the leading styles of design and execution, past and present, in their best and most elaborate form. The publication of the *catalogue raisonnée* of this class of work was entrusted to Mr. Pollen, who in a large and thick volume* has supplied an amount of information and descriptive criticism in regard to each object, which should very much elucidate the study of the collection, and will form an interesting compilation for reference apart from it: while the introduction preceding the catalogue furnishes a sketch of the history of furniture design, so far as there are data for it, written in a remarkably clear and readable style, and diversified by very able and thoughtful criticism.

So far, we say, as there are data for such a history,—for most articles of furniture being of more or less perishable materials, it is obvious that the study of it from any adequate number of examples must be confined to the period of the average duration of constructions in oak, walnut-wood, and ebony, and other even less lasting materials. Even so far as existing examples take us, however, a connected history of the subject has not yet appeared, and Mr. Pollen's essay is offered as "an attempt to connect together information which is to be met with in books on many subjects"; though the writer modestly disclaims the idea of having achieved a history that can be considered by any means complete.

The two extended chapters into which the introduction is divided deal with the subject from two different points of view: the first chapter tracing the history of the art of decorative furniture generally from one nation and period to another, in relation to the prevailing artistic taste of each period; while in the second chapter the author takes up special articles of furniture, as "bedsteads," "chairs," "tables," &c., devoting a separate section to each, and pointing out the changes which each underwent at different periods. The first chapter is divided under the heads *Antique*, including Egyptian, Ninevite, Greek, and Roman work; *Modern*, including Early and Late Mediæval; and *Renaissance*, including seventeenth and eighteenth-century work. The antique section is, of course, much the more concise; and, in fact, any detailed writing in regard to antique furniture must be based on so few examples or representations, that only very general conclusions can be drawn in regard to it; and the few forms preserved to us are mostly well known through illustration, and have, in fact, formed a good deal of the stock-in-trade of painters and book-illustrators. It is not, therefore, much to the purpose to go over again what has been picked out with doubt and difficulty concerning the domestic habits and furniture of the Greeks and Egyptians. The course is clearer when we come to the times of Imperial Rome, and meet with representations and remains of typical forms of furniture, in the shape of couches and "loo-tables," and other things, the forms of which have furnished types, sometimes very little altered, down to perfectly modern times. The hints of ingenious and extravagant luxuries of service and arrangement at Roman entertainments, which reach us in a kind of half-understood fashion through the pages of satirists and historians, tell us for certain only that there must have been a great deal that would have interested us in the furniture and *objets de luxe* of that enervated and licentious period. When we quit this classic ground, and come to what our author calls by comparison the "modern period," we find little to take us beyond conjecture previously to the twelfth century, and then of course rather by records than by objects remaining. In the next two centuries one of the most marked and characteristic customs in connexion with furnishing of which we have record, is in the accounts of the preparations that were made in the bedrooms of Queens of England to which they retired before the birth of a child. Henry III. directed that his queen's bedroom "should be freshly wainscoted and lined, and that a list or border should be made, well painted with images of our Lord and Angels, with incense-pots scattered over the list or border; that the four Evangelists should be painted in the chamber," &c. There is something not unsuitable or unpleasing in the semi-religious pomp with which the august expected event was thus surrounded. In one respect opinions would seem to have altered by the time of Henry VII., for in an account quoted as to the decking of the chamber of his queen for a similar occasion, it is observable that no figure subjects were allowed on the tapestry, "being inconvenient for ladies in such a case," and for fear of any sudden fright from "figures which gloomily glare." How characteristic is the last sentence, with its suggestion of heavy dark tapestry pictures, calling up such weird fancies as Scott has portrayed in his chapter on the "green-room" at the antiquary's residence. Our author points to the hammer-beam roof of the fourteenth century as accompanying or marking the period of great changes in furniture and household woodwork. The roof was no improvement scientifically on its predecessors, but it marked a growing taste for richer and more purely ornamental treatment of woodwork in this country. It was after this period that furniture and architecture assimilated more in design. Before this period "a certain originality and inventiveness was preserved in the decoration both of architective woodwork and furniture," and the general forms were designed "*without* immediate imitation of architectonic detail."

In noticing the constant repetition of architectural detail in the furniture of the fifteenth century, and its generally architectural character, Mr. Pollen suggests that we must take into account how extensively timber was used in the ordinary domestic buildings of that century,*— oak especially, which became the favourite wood both for house-building and furniture,—and probably the same man who carved the beams and panels on the house-front would be called on to make the furniture, and this intimate connexion between the two branches of work may also have paved the way to the extensive imitation of stone detail (buttresses, &c.) in the furniture of the late Perpendicular period. It does not do to be too critical upon matters of principle of this sort, perhaps; for a quantity of the finest ornamental furniture (and other work, too) in European countries is bad in principle; but one cannot help comparing the effect on the judgment of the finest of this architectonic work with that of the large cabinet of German make (No. 497, photographed in the catalogue), to which Mr. Pollen applies the epithet which, we remember, involuntarily escaped us on first noticing it, "grand"; and it really is that, yet it is absolutely without the refinement of modern cabinet-makers' design and workmanship; it is simply a great solidly-put-together piece of carpentry, decorated with fine metal hinges and with sunk tracery ornament of the most beautiful, though simple, design, and so placed as to add to and emphasise the square, massive character of the whole. It is a striking instance of the effect that may be obtained without going beyond the sphere of carpentry proper, and without the slightest imitation of detail properly characteristic of another class of object or of material.

Yet, on good or bad principles, there was much beautiful furniture made in England in this Late Gothic period; and, as Mr. Pollen observes, "It is difficult to realise," in regard to these works of art, "the England which Leland saw in his travels. It must have been full of splendid objects, and during the reign of Henry, the feudal mansions, as well as the numerous royal palaces of Windsor, Richmond, Havering, and others were filled with magnificent furniture. Mabuse and Torrigiano were employed by the king, and this example found many imitators; artists, both foreign and English, were employed to make secular furniture, as rich and beautiful as that of the churches and religious houses that covered the country." And yet, as our author observes, "the whole system awaited a change;" and perhaps this coming change was as much foreshadowed by the increased attention to, and correctness in, delineating the human figure, as in anything else. For it is a curious, but we think indisputable fact, that the power of drawing or carving the figure well, and the indulgence in it, has scarcely ever co-existed with the power of producing the most picturesque and fanciful ornamental work. The one seems adverse to the other: it is so in special nations, as well as at special periods, as we see in the case of the Japanese, as well as other Eastern nations; splendid in the brilliant fancy and exquisite workmanship of their ornament, contemptible and ludicrous in their figure-drawing.

However, the Renaissance dawned, or set (whichever the reader pleases) upon Europe, and architectural forms, imitations of Classic detail, became predominant in furniture. "An architectural character, not proper to woodwork for any constructive reasons, was imparted to cabinets, chests, &c. They were artificially provided with parts that imitated the lines, brackets, and all the details of Classic entablatures which have constructive reasons in architecture, but which, reduced to the proportions of furniture, have not the same propriety. These subdivisions brought into use the art of *joinery*." Furniture was taken out of its obvious forms in order to impress upon it a Renaissance character. It was not perceived at the time that this might be done, and unity of character might be entirely preserved between the architecture and the furniture, without transferring the treatment

*Ancient and Modern Furniture and Woodwork in the South Kensington Museum: described with an Introduction, by John Hungerford Pollen. Published for the Science and Art Department of the Committee of Council on Education, by Chapman & Hall, London.

* And far into the next, as a passage in the first scene of the "Merchant of Venice" curiously indicates, where *Salanio* describes what his anxiety would be if he had ships at sea:—

"Could I go to church
And see the holy edifice *of stone*,
And not bethink me straight of dangerous rocks?"

The evident conclusion is, that he would not be in the habit of seeing any other buildings "*of stone*."

and details of the former to the latter. But the movement in favour of this architecturalised furniture was as universal in Europe as the Renaissance movement itself; and, as Mr. Pollen observes, "in describing the furniture of Central Italy of this period, we describe the history of contemporaneous furniture throughout Europe." And we may add that modern society has, for the most part, been ever since under the dominion of this architectural idea in regard to furniture. And this domination is owing not only to the great intellectual prestige of the Renaissance, associated as it was with some of the greatest names in the history of art, but to the fact, alluded to at the commencement of these remarks, that so little furniture remains earlier than the sixteenth or latter part of the fifteenth century; consequently we date back, or the popular notions on the subject do, only to times when the architectural ideal was in full force; and there is nostore of counteracting models of another school to act as a corrective to public taste. The consequence is, that the majority of persons can form no idea of a bookcase or a cabinet or a wardrobe except as a thing with a *cornice*, and think it unfinished without; and we see daily examples of architectural-looking sideboards with consoles and brackets supported on substantial-looking columns which, to the amazement of the beholder, swing away with the door when it is opened. It is excusable that the public, who have been habituated, one may say, for generations to this style of thing, should regard it as a necessary condition of ornamental furniture; indeed, one may suppose the taste for it to undergo hereditary transmission; but what are we to say to some of our leading Gothic designers, the priests and profits of the "true" in art, who out-herod Herod in this respect, and put forth designs of cabinets with sloping roofs, imitation tiles, and dormers? If they are laughed at for this, what else can they expect, on their own principles? And why do they do it?

After Italy, there can be no question that France came out most successfully in the execution of Renaissance furniture. Two or three of the examples in the Kensington Museum are, allowing for defect of style, unsurpassable in their way. The English artificers scarcely attained the same refinement; their work may be mistaken for Flemish at times, but not for French. It may be doubted, however, whether the north German woodwork of the Renaissance, though inferior in workmanship, is not more interesting and picturesque in effect, and more masculine and vigorous in manner. Taken as illustrated at Kensington this is certainly the case, unless in regard perhaps to one French cabinet. The figure decorations are inferior to the French in execution, but they have more point and interest, much of the French figure-sculpture of the period being confined to neat execution of nondescript half-figures ending in artificial scrolls, and suggesting nothing whatever either of beauty or interest. In the Flemish furniture work the figure is made much more rational use of as a rule. "It should be added, also, that their designers and architects had an immense sense of dignity, which we recognise immediately when we see their compositions as a whole. Depths and hollow points of light, prominences and relative retirement of parts in their arrangements of carved ornament, were matters thoroughly understood; that general agreeableness which we call 'effect,' a certain impression of their work as a whole, which they succeed in imparting to the mind of the observers." A somewhat similar criticism may be passed on the work of the Elizabethan period in England, of which Mr. Pollen observes that though the "proprieties of art" are violated by them at every turn, "yet we retain a sense of their dignity and appropriateness as a whole which defies criticism." He adds what is certainly the case, that even the comparative rudeness of execution adds to their effect, "often much lessened by the more mechanical neatness of modern work when reproduced in this style." That this is so is undoubtedly owing to the broader play of light and shade which this rougher execution allows of, in comparison with the smooth surfaces and thin sharp edges of modern work of the same school. It is strange that this should not be perceived by such talented modern makers as Messrs. Fourdinois, for instance, whose beautifully finished cabinet (2,692), with the figures in relief of excellent design and modelling, nevertheless has a singularly tame and merely pretty effect in contrast with some of the works of the sixteenth century adjoining it.

The introduction of marquetry, together with the decline of the architectural movement of the Renaissance, encouraged the treatment of boxes and cabinets as such, the ornament being applied in flat inlay, instead of in the shape of architectural features and carving. It must be admitted, however, that the works produced in this form are for the most part inferior in character and interest to the best of the Renaissance style proper; but there is no reason why they should be. The inlaid furniture was, however, often made so destitute of surface relief or construction lines, that its appearance was weak and poor, in spite of the elegance of the ornament.

Every one is familiar with the ornament of the eighteenth century, or that most characteristic of it, which has immortalised Louis XV., under whose reign it originated. There are some typical specimens of this in the Museum in the shape chiefly of picture-frames, cut in soft wood (gilt) in those extraordinary broken curves sometimes called *rococo*, a term originating, all our readers may not be aware, from *rocaille coquille*—rock and shell work. The close of the century, however, saw a comparative purification of taste in the rise of the *Louis Seize* school, noted for a finish and delicacy of execution, and a certain cold elegance of design, suited at least to the feeling of the time.

The whole of this French post-Renaissance work is, in fact, pre-eminently the art of the *salon*,—of a society rich, luxurious, and coldly intellectual, desiring to have everything brilliant and elegant about it, and indifferent as to truth of principle or dignity of style. There is a sort of *morale* about furniture, a relation between its character and the character of those who use and approve it, which gives to a collection of work of this kind more than a mere artificer's interest. In the great activity that is now being displayed in the revival of artistic furniture, it is gratifying to see how much purer and better the taste of the drawing-room is becoming (where it has any taste at all) than was that of the French *salon*. There are symptoms, too, of something like a chance of art furniture for the many, as well as for the few. The highest class of work, of course, must always be expensive, but there is more effort now towards making things artistic in a simple way than there has been for a long time, though still within very confined limits.

We have not space here to follow our author through his chapters on the special history of different branches of furniture; but we may return to the subject in reference to some of the typical examples to be found in Kensington Museum. In noting our appreciation of Mr. Pollen's valuable labours, we may express a wish that this catalogue could be issued also in a small and portable cheap form, without the illustrations, and perhaps with some abridgment, with a view to induce its use by visitors on the spot, and in examining the furniture. The present volume is too large except as a reference catalogue, and is not likely to be bought by ordinary visitors, who nevertheless would be much the better for some guide to point out to them what is really best worth study and admiration. The persistency with which they at present collect round and exclaim over all the *gilt* articles, mostly the worst in point of taste and artistic value, is rather painful to the nerves of the critical bystander.

The only fault we have to find in connexion with the catalogue is the entire want of order in the arrangement of numbers either in the book or in the Museum. When we wish to refer from the object to its description in the catalogue, a considerable hunt through the pages is required to come on the number; and as to finding in the Museum an object mentioned in the catalogue, that seems to be a mere matter of chance; you may or may not. Mr. Pollen gives, as a frontispiece, a chromo-lithograph of a large carved and gilt coffer, as one of the finest specimens in the museum of Italian work of its class. This, however, is nowhere in the furniture corridor, nor among the works of a similar class in one of the upper galleries, nor could any official furnish information as to its whereabouts. This is not quite as it should be. A more systematic arrangement and classification of the objects mentioned in the catalogue would surely be possible, and is certainly desirable.

Freehold Property in the City of London. Messrs. Haxell & Green have sold at the Mart the freehold property, 15, Gresham-street West, with a frontage of 21 ft., for the sum of 10,000*l.*

FRENCH EXCURSION OF THE ARCHITECTURAL ASSOCIATION.*

ON Friday evening in last week, after a fortnight spent in company, the party mustered in good force at Rouen, picking up there a few stragglers, who had not followed the other part of the second week's programme, for which Rheims had acted as the deputy-headquarters. Then the undispersed and those returning thus to the standard, devoted a postprandial minute or more to comparing notes, and the orthodox mixture of speechmaking and ringing cheers;—in England regarded with calm complacency by onlookers, but here the theme of some wondering comment, and it may be of doubts as to the entire sanity of such fabricators of strange sounds. Imagination is not given to every Frenchman vivid enough to startle him into ecstasy at English hurrahs and the expression of convivial feeling in "musical honours." M. l'Abbé J. Gérin, of Senlis, may well be regarded as the to be expected exception; when writing in the following way with no little enthusiasm anent a somewhat similar performance in his town:—"Rien de plus touchant et de plus gracieux à la fois, que ce toast Anglais, chanté, le verre en main, par toutes ces voix mâles et patriotiques, dans les salons de M. Duviquet." . . . But at Rouen to the British party came no lingering doubts—for they drank and toasted the leader who had brought a good time to a happy ending—by his forethought, knowledge, and personal kindness.

At Soissons, the party were politely received by the Bishop. M. l'Abbé Delaplace, Dean of the Chapter, and two of the members of the committee having charge of the building, were in attendance during the stay at the cathedral.

At Rheims, M. Le Baye, Curé-Doyen de la Basilique de Saint Remi, accompanied the members to all parts of his church, taking an active interest as a practical archæologist in the many architectural problems to be found in that interesting example of an earlier building remodelled into Lancet. Mr. Leblan, of Rheims, architect, thoroughly familiar with every detail, and armed with the complete and beautiful series of drawings prepared for the Government, in illustration of this historical monument, also attended; as also the architect who some thirty years ago designed and carried out the west front as it now stands.

In order to meet the party at Laon, our *confrère*, M. Boeswilwald, made a special journey from the south of France, and spent a most active time in the cathedral and at St. Martin and the other buildings of interest in the city, till the hour of departure arrived. Triforia, towers, external galleries,—every portion of the works of the great cathedral,—were visited in his company, and a piece was set up on the nave floor, by his direction, to show the construction of the new iron roof (slated, but no wood used). M. Dechaume, the sculptor, now at work on the west front, should not be passed without a word of thanks to him for his attentions, nor the courteous and welcome-giving clergy of Laon.

At Chalons-sur-Marne,—but why continue a recital which for those not present might be tedious, and for those present unnecessary? Almost without exception, the clergy, who had been apprised of the coming, showed themselves eager to be present, and to bring other local authorities with them. The good Curé of Champagne (sur-Oise) is stated to have announced from his pulpit on the previous Sunday the expected arrival, in the course of the next week, of "*La docte caravane*,"—as (with a happy allusion to the five-horse vehicles conveying MM. les Archæologues d'Angleterre) one of the local journals denominated the party.

In so rapid a movement through a number of monumental buildings, some distinctive features of architecture and its condition, of course, force themselves prominently into notice. One of these is the very considerable amount of reparation and renewing that has been lately done, or is now in hand. It is happily no novelty in England to find dilapidation being provided against, and buildings threatened with ruin or injured by unseemly interpolations being restored to something resembling their original condition. But the pertinacity of the efforts to maintain or to complete afresh ancient buildings in England seems even outdone by that shown in France,—at any rate, in the case of the more prominent buildings. Of course, this is no new matter;

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* See pp. 703, 721, *ante*.

for long it has been the cause of no little consternation to architectural antiquaries and the numerous body of critics more devoted to the historical aspects of, and preservation of authenticity in, national monuments, than concerned for their completeness of design, or troubled at *lacunæ* in their details. The conservative instinct in England has allowed but a narrow field nowadays to the restorationist; and that field, as each day the arena for practice grows narrower, still lessens in theory. But let us note, in series, some of the important buildings of France looked at during the last few days that have been very much changed in the course of no great number of years, or are now in a fair way of losing some of their present features. St. Germain des Près, one of the oldest buildings in Paris (nave of eleventh century) is now a by no means unpleasing interior, decorated in the time of Charles X. and onwards, with "nave capitals copied from the old with scrupulous fidelity"; and externally its Romanesque tower is the result of considerable restoration. Notre Dame every one has watched, and the renovations of its buttresses and piers, *flèche*, renewal of statues and carving, as well as its additional sacristy and other buildings to the south. La Sainte Chapelle is still in hand, with scaffolds at the west doorway, and changes of stonework in progress. Its internal painting, in red and green, and gilt, and blue, has for years been the theme of regret among the advocates of visible joints in masonry, and of natural light and shade; and enthusiasts for thirteenth-century stained glass grumble at the violent vigour of the wall surfaces, urging that they would be better content to rest their eyes at intervals there while drinking in the splendours of the glazing. The *flèche*, so noticeable externally, dates from 1853. The old church at Montmartre,—on the hill which is to hold the wonderful Marie Alacoque building, proposed by the present Archbishop of Paris,—is now regarded as a public monument, and as such cared for by the State; and, as a consequence, the whole of its triapsidal east end is closed off for restoration, though the necessary demolition is not yet seriously begun. St. Denis still remains as it has for years, the subject of pulling down and putting up: several bays at the west are now fenced from the church; the chapel of brick and plaster existing up to now on the south side of the nave-aisles (a work of the last century) approaches its righteous doom. The Church of Notre Dame,—once the Cathedral,—at Senlis, has all the marks of renewals in the eastern chapels, and parts of the west front. Beauvais Cathedral is in hand under M. Vaudremer. The wonderful tower of Champagne is scaffolded from church roof to tower gable. At Evreux, the nave is, with the exception of three bays, divided off from the rest of the church, and is being actively dealt with under the guidance of one of the Government architects. Two of the flying buttresses on the north have been pitched in pieces on the ground, and as some cracks have shown themselves in the filling in of the vault it is proposed to renew the whole. These works are not regarded with favour apparently by the townspeople and local antiquaries at Evreux, who appear to lean to the preservation, if at all possible, of the old work unaltered. One of the local anti-destruction party took occasion to mention that M. Delamotte, chef de division des travaux au Ministère des Cultes, deserved a place in the pillory of history for destroying (as he put it) St. Front at Perigueux, the cathedral at Angoulême, &c., and for finishing up a long career by menacing the well-reverenced cathedral of Evreux. At Soissons, also, in the rare south transept with its circular south end, contemporary with the choir at Canterbury (William of Sens, 1174-1178),—a dated example, 1168-1175,—preparations are being rapidly made for the taking down. The platform is just complete at the level of the clearstory. The work is to be re-erected where necessary. The western portion of the nave at Laon is temporarily cut off. The whole building has been the scene of very heavy operations. The re-building of the tower piers—a work of great importance—was effected by building between the great arches, and building also on the outer sides of the piers. Arches were then turned from the new sound work (two to each side), and the piers, &c., thus relieved of their loads, rebuilt. The new roof is probably worthy of imitation, certainly against its principle nothing can be said; its perfectly incombustible construction is far in advance of the threatening masses of woodwork piled up anew from time to time on our English cathedrals. The little chapels (upper and lower) of the Episcopal palace, east of the cathedral, are just being got in hand; now they are beautiful, if somewhat untidy, masses of grey colour, covered with all the rust of untouched antiquity. The cathedral at Chalons will soon have many new parapets and buttress tops. Its south transept has been refaced or rebuilt,—but unluckily shows fresh and wide fissures on the surface, having, to all appearance, torn itself bodily westward. Notre Dame here has been restored thoroughly inside and out. Workmen make signs of their presence at Rouen. One would hope some day the wondrous central spire will receive abatement. The fresh spire at St. Maclou caused a sigh to some of the party who had seen the church without it. The original defect—a want of repose—has been intensified by this erection, which calls out, like to all around it, for the first share of attention, and tends still more than of yore to render a mere aggregation of details what for its many merits,—its elegance and grace among others,—most of us would be glad to regard as a work of serious architecture, possessing a real unity of character.

In the above list, which is sufficiently lengthy to point a moral for those who wish to indulge in that recreation, no notice has been taken of numerous other ecclesiastical buildings which show the marks of less radical reparations, nor have the civic buildings been mentioned. The mention of the fact that a water-tight roof, with central gutter, has been erected in the Salle des Pas Perdus (west wing of the Palais de Justice), at Rouen—leading one to expect a renewal of the old ship-like roof of that large hall,—may, however, interest some traveller just now; and the additions of masonry of about a third of the previous height, and of a bracketed wooden gallery, and a conical slated roof to the Tour du Donjon, associated with Joan of Arc, form, taken together, a work of restoration—no doubt efficient enough for some purpose held in view by the directors—but a little amazing to advocates for letting things alone when you can.

As being apparently in marked contrast to the tendency at work, leading on occasion to restoration *à outrance*—the neglect of other good buildings might be alluded to: as evidence (some of our patriotic band would allege) of the English not being the only illogical people in existence. St. Frambourg, at Senlis, one of the finest of possible unaisled interiors, of most elegant Lancet, just clear of Transitional—nearly 32 ft. clear width, and ten full bays in length, and with an apse beyond,—is a stable and cart-house, and a shed for building stores. St. Pierre, in the same town, mostly Flamboyant, but with many remains of Lancet work of great beauty, is a cavalry stable, of which one may allow M. Gérin to speak:—"Faut-il ajouter ici à notre honte,—espérons qu'elle sera maintenant de courte durée,—avec quel étonnement douloureux ces architectes contemplèrent les chevaux de nos cuirassiers installés dans les nefs bâties pour la prière?" (*Journal de Senlis*, August 20th). St. André, at Chartres, with very rare Transitional carving, and rich Flamboyant side-chapel, and a west front of beautiful proportions, is filled with hay,—is, in fact, part of the buildings of a farmer. St. Pierre, at Soissons, nave and side aisles, large west doorway of four orders, and a most elegant Transitional design, with a strong tinge of Romanesque feeling, contains a cooper's workshop and casks. And these are only one or two instances among many,—though, perhaps, as decided as any that could be conveniently hit upon as samples of model ecclesiastical edifices turned wholly to not particularly dignified secular uses.

At the risk of descending still further into common-place, another impression made on the mind by actual contact with a number of buildings in a short space of time, and not simply the result of reflection,—may here find a place. It would evidently seem also to run in with a prevalent feeling among some of the leading practitioners of English Gothic just now.

The great use of the visible vault as connecting the interior of a building into unity,—binding the whole together at the summits of the walls, as it is bound by the floor at their bases,—appears indubitable,—instinctively felt, indeed,—when the single walls of the ordinary English parish church are jimaged out beside the still-uprising masonry of arched walls,—the stone vaults found in such French parish churches as Melle, Champagne, Gonesse, &c. It may be ungracious to depreciate the graceful and grand timber roofs that, well fitted for their positions, crown not a few of our larger parish churches; but it would seem a simple fact that no interior can equal in genuine expression of architectural oneness (connexion and interdependence of parts) that constructed from base to ridge in similar materials, and with all the main bearing portions evidently in a state of compression. Apparent altitude, so essential an element of dignity of effect, can never be attained without some courageous insistence on so vulgar a thing to all seeming as simple extent of dimensions.

Rasing the side walls up to the wall-ribs, and carrying the eye without a break of colour, or discontinuity of design, along an over-arching vault;—these are means by which the natural heights may be seemingly increased. But nothing can make up to the ordinary English church for its pair of divisions, with no outrageous space for either,—when thought of in comparison with the three-storied bays of lofty ground-stories and clearstories, with blind stories well in scale, and supplying usefully, also, another term in the proportions.

But these considerations would find with difficulty their necessary limits, and would no doubt lead one further than opportunity will allow. It may, therefore, be advisable to break off now, and therefore to postpone the promised diary.

Dieppe, August 31.

JOHN HENRY FOLEY, SCULPTOR.

A GREAT artist has left us. Mr. John Henry Foley, R.A., who died at Hampstead on the 27th ult., was incontestably at the head of his profession, and had achieved a reputation which will grow as the years go down,—"as shadows do at nightfall." He was born in Dublin in May, 1818, so that he was only fifty-six when he died. His attention being early directed to art by his step-grandfather, who was a sculptor in the Irish metropolis, young Foley, when only in his fourteenth year, entered the drawing and modelling schools of the Royal Dublin Society, and, having carried off almost every prize, resolved to try his chances on the larger and wider field of England, and to make sculpture his profession. With this object in view he came over to London, and became a student at the Royal Academy. This was about the year 1834, when he was just sixteen. Five years later, when scarcely twenty-one, he appeared for the first time as an exhibitor in its rooms. His works in 1839, "The Death of Abel," and "Innocence," attracted much attention; but it was his contribution of 1840, "Ino and Bacchus," which may be said to have made his fame, and from this period his success was assured. The work itself was purchased by the Earl of Ellesmere. At the competition invited for the important task of executing statues for the new Palace of Westminster, Mr. Foley readily entered the lists, exhibiting, in addition to his "Ino and Bacchus" just named, the "Youth at a Stream," executed for the occasion. At this time, however, his commissions were but few, and the writer well remembers when he went to Mr. Foley, on the part of the Art-Union of London, with proposals that he should execute for that Association statuettes of the "Youth at a Stream," and "Innocence," to be produced respectively in bronze and Parian, the more than ordinary gratification expressed by the sculptor. These commissions were carried out with the most anxious attention, as was a similar commission for the same Association in later days, a reduction of his noble statue, "Caractacus," which, executed in bronze by Mr. Hatfield, we have no hesitation in regarding as the finest work of its kind produced in England.

The Westminster Hall competition led to his being commissioned to execute the statues of Hampden in 1847, and Selden in 1853. Mr. Foley in the meantime became an Associate of the Royal Academy in 1849, and two years later his well-known work, "The Mother," was exhibited. In 1854 the Corporation of London requested him to execute "Egeria," which now adorns the Mansion House. For the same body he modelled four years afterwards the "Caractacus," which is also placed in the Mansion House, and to which we have already referred. Before this work was finished, however, he received a commission from Calcutta for a group, "Lord Hardinge and Charger," which he executed in bronze, and on the completion of this in 1856, he received a public request from upwards of a hundred and fifty gentlemen distinguished in literature and art, asking him to provide a copy of the work for the metropolis as an illustration of the perfection of contemporary art. Another

noble group—the equestrian statue of "Sir James Outram" (probably his greatest work), also for Calcutta—was, as may be remembered, temporarily placed in Waterloo-place, whence it was finally removed at the close of last year. A committee was formed in this case to secure a replica of the work; and Mr. G. F. Teniswood undertook to act as honorary secretary. Some hundreds of letters were sent out inviting subscriptions, but the replies did not justify proceeding, although the admiration expressed was universal. In 1858, the year in which his "Caractacus" was produced, Mr. Foley was elected Royal Academician, and gave as his diploma work his "Comus." From that date requests for the eminent artist's services came in on all sides, from public and private sources, with such rapidity that he was unable to execute them, and for a time serious illness compelled him to abstain from work altogether.

Previously to his election as Royal Academician, he had executed, besides the works mentioned above, the "Houseless Wanderer," "Lear and Cordelia," "The Death of Lear," "Venus rescuing Æneas," "Prospero relating his Adventures to Miranda," "Contemplation," and "The Mourner."

Of late years he exhibited nothing at the Royal Academy, in consequence, as we have understood, of what he considered a slight. Among his most important portrait statues may be mentioned Sir Charles Barry, executed by subscription for the new Palace at Westminster; Lord Herbert, for the War Office; Lord Elphinstone, for Bombay; the Hon. Jas. Stuart, for Ceylon; Edmund Burke and Oliver Goldsmith, for Dublin; Father Mathew, for Cork; Sir Henry Marsh and Sir Dominic Corrigan, for Dublin. Mr. Foley was a member of the Royal Hibernian Academy, and in 1862 he was elected a member of the Belgian Academy. His group of "Asia," on the Albert Memorial in Hyde Park, is a splendid work. Mr. Foley, on the death of Baron Marochetti, was commissioned by her Majesty to execute the great statue of the Prince Consort for the National Memorial in Hyde Park, the model of which he had successfully completed, and he was busily engaged in superintending the casting in bronze nearly up to the period of his lamented death. He had previously executed statues of the Prince Consort for Dublin, Cambridge, and Birmingham. One of his best known monumental works is that of James Ward, R.A., in Kensal-green, of which we published an engraving at the time of its completion. He leaves models in progress of equestrian statues of Earl Canning, for Calcutta, and of Lord Gough, for Dublin. Also full-size models of Sir Joshua Reynolds, the Earl of Rosse, and of Faraday, and the statue of Sir Benjamin Lee Guinness, which last is completed at the foundry. Sketch models of John Stuart Mill, of Lord Derby (for South Lancashire), the Marquis of Lothian, and of many others, have also been prepared. He was an indefatigable worker, never satisfied, and often destroyed in a moment the work of months. We have heard it said, laughingly, in the studio, that the modelling of Outram's horse's tail cost 37*l.* 10*s.*, so often was it cancelled. Mr. C. B. Birch and Mr. Brock, who had both long assisted him, are named by Mr. Foley to complete his unfinished works.

We are glad to be able to conclude this too brief notice of a most distinguished artist with the intimation that on this (Friday) morning the remains of John Henry Foley will be interred in the crypt of St. Paul's Cathedral, near those of his peers. There were difficulties in the way of this most proper act, but they were surmounted by the determination and energy of two old and warm friends.

The Preservation of Timber.—Sigismund Beer, a German chemist, says the *Timber Trades Journal*, discovered that by the use of borax as a solvent the coagulation of sap was prevented, and it could be speedily and effectually removed by boiling, without injury to the wood tissues. The obnoxious ingredients being thus removed, the wood is rendered closer in grain, and thereby improved in appearance, becomes impervious to decay, and perfectly indifferent to atmospheric changes. Mr. Beer patented his discovery in America, on the Continent, and in this country, and eventually disposed of the rights for Great Britain to Messrs. Joseph Pierce & Co., Regent-road, Liverpool. The efficacy of this process in seasoning wood has been efficiently proved.

ODDS AND ENDS FROM BELFAST.

BEFORE selecting a few subjects from the voluminous reports of the Belfast meeting of the men of science now before us, we may say that one decided local good which the meeting has already done is that, through a discussion which took place in the section of Economics, a reconciliation between employers and employed may be said to have been at once brought about. This good news was announced with radiant countenance by President Tyndall. The suddenness of the compromise made it none the less welcome, and the mills that have long been silent will again open as the British Association closes.

Capital and Labour.

The interest of the meeting centred in the Economic Science and Statistical Section during the discussion of this subject. The section was crowded throughout the day. Lord O'Hagan presided in the first instance, and Sir George Campbell then took the vacated chair. The question was that of trade-unions, strikes, and lock-outs, and a number of working men representing the mill operatives on strike in Belfast were invited to be present to express their views.

Mr. A. Hamilton presented a report from the committee on the economic effects of trade-unions and on the laws of economic science bearing on the principles on which they are founded. The report, which had been prepared by Professor Leone Levi, stated that the question had been before the Association on other occasions, and in 1859 a committee reported upon it. Since that date a royal commission had inquired into the subject. These inquiries furnished sufficient materials for arriving at a sound judgment on the question submitted for consideration. Nevertheless, it was now evident that the economic bearings of the questions at issue were as yet but insufficiently appreciated, especially by the parties most interested in the question. It was, indeed, much to be desired that the relations of capital and labour were put on a more satisfactory footing than they now appeared to be placed, and the committee trusted that they might render some practical service to the contending parties if they were able to test the claims urged either by employers or employed by referring to the sound principles of political economy. After referring to the dual character of trade-unions—their friendly society side and the workmen's protection society phase of their organisation—the report noticed the formation of combinations among employers, the latest instance being the National Federation of Associated Employers, recently organised in Manchester as a defensive organisation of employers of labour to resist the designs of trade-unions so far as these were hostile to the interests of employers, the freedom of non-unionists, and the well-being of the community. Although the general object of these combinations, whether of capitalists or labourers, was well known, both from the written rules which bound them together and from what had been spoken from time to time, the committee thought it desirable to ascertain, by personal contact with some representative men of both classes, as to whether they now stood by the rules of their unions, and how far they were prepared to defend them. For that purpose, the committee stated, a conference between employers and employed was held on the 17th of May last, in the rooms of the British Association, when the questions discussed were:—1. What might be regarded as the minimum rate of wages? 2. Could that minimum rate be uniform in any trade, and could that uniformity be enforced? 3. Was combination capable of affecting the rate of wages, whether in favour of employers or employed? 4. Could an artificial restriction of labour or capital be economically right or beneficial in any circumstances? The committee, however, had not been able to exhaust the inquiry on the points in dispute between employers and employed, and they had therefore determined not to make a final report on the present occasion, but recommended that the committee should be reappointed.

Mr. F. W. Fellows, F.S.S., next gave an exposition of political economy, and the laws affecting the prices of commodities and labour, and strikes and lock-outs; and contended that though unfortunately this science was often spoken of as hard and harsh, yet a better knowledge of its principles by both employers and employed would do much to prevent the unfortunate strikes and lock-outs that wasted so much of our national resources. Speaking of trade-unions, he argued that it was the brain and directing power and the economising spirit that had created capital and increased wages, and not combinations or lock-outs or strikes. Strikes, he contended, had a result different from that which was generally supposed. Strikes did good, but they did so by finding out that spot where each article could best be made.

Mr. W. H. Dodd, M.A., Barrington Lecturer, read a paper on "The Law of Strikes and Trade-Unions," in which he showed that the laws of pure political economy did not act without modification, and that there were matters which in practice varied these laws. They were modified, he said, by the nature of profits themselves, the first element of which was remuneration for saving or interest; the second was remuneration for risk or assurance; and the third was the wage of superintendence, including all elements not included under the first two. It was this third element that a combination of labour attacked. On that very account a strike was more difficult of settlement, since the amount of profits was unknown to those attacking them. Though feudalism, he remarked, had ceased to be sole arbiter in land tenure, and though relations between capital and labour were supposed to be founded solely on contract, political economy could not organise and did not seek to organise. The fact was that friendliness and sympathy and co-operation between employer and employed, as between landlord and tenant, was not only the best security for social content, but was also the way to utilise to the utmost the productive forces of nature. He also laid before the meeting in detail the particulars regarding the strike in the linen trade in Belfast.

Sir George Campbell suggested that, as they had heard the principles of political economy expounded, the speakers might apply themselves to the practical question, How the acknowledged evil of strikes could be remedied? He might say that he was not an adherent of pure political economy. He was inclined to believe that if they could have no combinations of any sort or kind, if the question of wages could be left to the pure laws of supply and demand, probably that would be best for all parties. But they knew as a matter of fact that this was now hardly attainable. They knew there were opposing camps of employers and employed, and it was for them to ascertain how these companies might be best reconciled for the advancement of all parties.

Mr. James Brownlee, secretary of the Flax-dressers' Association, then stated the case on behalf of the men of Belfast now on strike. While admitting that wages must be subject to the laws of supply and demand, he endeavoured to show that the exigencies of the times did not justify the proposed reduction of wages, as it was only the associated masters who considered that trade was depressed. He thought, therefore, that it lay with the masters to prove their case; and that, in his opinion, they had failed to do. Mr. Brownlee also drew attention to the expensive management of limited liability companies at the present day, and argued that the workmen should not be made to suffer from that cause.

Mr. William Ewart, millowner, Belfast, on behalf of the associated millowners, said that he did not look upon this as a strike between labour and capital, but it was altogether brought about by the bad state of trade, which he thought was palpable to all who lived in Belfast. Intimation of that, he stated, had been given to the workers. In regard to arbitration, he said he did not like arbitration. He thought that if the principle was to be established that wages should be settled by arbitration, they might bid good-bye to any increase in the trade of the country, for, he asked, what man would embark his capital in a trade where he would have nothing to do with settling the rate of wages, but these must be settled by other people? He, however, liked mediation and adjustment, and he thought that if the workers would appoint a committee with powers to adjust matters with the masters, the dispute would be settled at once.

In the course of a long discussion which subsequently followed, Mr. Councillor Hart created great amusement by arguing strongly in favour of protection as a means whereby employers could get more profits and workers more wages without strikes. Further information was given on behalf of the men by Mr. Brennan, who charged the millowners with having treated

every overture of the workers with scorn; but this statement was denied by Mr. Ewart, who stated that deputations invariably thanked the masters for the uniform kindness with which they had been treated. Ultimately, Mr. Ewart said he thought that the president of the section, Lord O'Hagan, should be asked to hear evidence on both sides, and give his opinion on the matters in dispute. This was advocated also by Mr. Whitwell. Mr. Ball suggested that in future such evils might be avoided by a scheme of partial co-operation between capital and labour in Belfast; and Prof. Donnell, of Belfast, defended arbitration in opposition to the views put forward by Mr. Ewart. He stated plainly to the workmen that they had nothing to fear from political economy, for Adam Smith, John Stuart Mill, Prof. Cairns, Prof. Fawcett, and Prof. Leslie were not only the highest exponents of this great and liberal science, but they were the warmest friends of the working classes, and ever foremost in every good work to promote their interests. The suggestion for the president of the section acting as arbiter, however, was considered impracticable, owing to the meetings being near their termination.

Surveys of Ireland.

In Section E, Geography, which met in the Presbyterian College, Major Wilson in the chair, a paper on this subject, communicated by the Ordnance Department, was read by Mr. Ryo. Although many very ancient charts and sketches exist, the earliest Government mapped surveys, it stated, are those made in the reign of Elizabeth by the Commission appointed by the Crown to carry out the plantation of Ulster. The great Down survey was made during the Commonwealth. After a terries had been made of the forfeited lands, the necessary measurements and mappings were commenced by the Surveyor-General, Mr. Worsly. He employed as contractor William (afterwards Sir William) Petty, who soon supplanted him in his own office. The survey was completed within the prescribed time. It was called the Down survey because it was laid down, and mapped in distinction from a mere terries or Domesday book. It consists of county maps, on a scale of forty perches to the mile. Many of the maps have been destroyed by fire, but have been replaced by copies; 260 are of baronies, and the remainder, 1,170, of parishes. These maps are evidence in courts of law. It was Frederick the Great who first introduced the science of military topography into the studies of his staff. The necessity of this science was soon felt in the armies of other European powers; and, after the battle of Culloden, General Watson conceived the idea of making a map of the Highlands. By the middle of 1824 observations had been extended over the greater part of Great Britain, and a select committee was appointed to provide for a general survey of Ireland. A survey of 6 in. to the mile was determined on, and in 1825 the Irish Triangulation began on Mount Divis, near Belfast. A large number of officers of the Engineers were employed under the immediate direction of Colonel Colly, the present Director-General of the survey being one of the distinguished men who took part in the early survey. The valuation of Ireland being, in the first instance, a townland valuation, the survey was originally called the townland survey. It is on the Ordnance survey that local assessments and taxes are based. It also acts as a basis in the transfer of property under the Landed Estates Court. The judge gives an order to the survey to revise that portion of the Ordnance maps relating to the property to be sold, the latest changes being inserted. This map, after being approved of by the judge, is lithographed, and the purchaser receives a copy on parchment, which is beyond dispute, the conveyance making over the property "as described in the annexed map." It is also used for the settlement of boundaries of electoral divisions, the carrying out of railway schemes, canals, roads, and all transactions between landlord and tenant relating to land. It is thus curious to observe that the Down survey, originally made the instrument of conveying to soldiers of Cromwell the confiscated lands, is in this year, 1874, the means by which the descendants of the original owners may have conveyed back to them, under the Land Act, the very fields their ancestors once possessed.

The Ulster Tenant Right.

In the section of Economic Science, Professor Donnell read a paper "On the Ulster Tenant Right," in which he made suggestions for the amendment of the Land Act. He said that the great boon which the Land Act had conferred on the Ulster tenantry was cordially acknowledged. The process of disintegration and distinction which had been at work to arbitrarily extinguish the tenant-right custom had been arrested effectually and for ever. But the tenants had discovered defects in the working of the Land Act, and complained:—1. That the restrictions on the value of their tenant-right property had not been fully removed. 2. That the leaseholders under the custom were not sufficiently protected. 3. That even where an unrestricted tenant-right was proved the process of judicial investigation led to an inadequate reward, and that the tenant failed to obtain what he could obtain from a solvent and unobjectionable tenant in open market. 4. That the process of adjusting rents was roundabout, indirect, and ineffective. 5. That the tenant right in certain classes of holdings mentioned in the 15th section, such as town parks and pasture-farms, had been left without legalisation, and was now being rapidly confiscated. All those were complaints as to the administration of the Act, not as to its policy. And they were not without justification in the language of the Act and the intentions of its authors. The protection which the Land Act gave to the tenant-right custom in ordinary holdings should, in principle, and in justice, be extended to all tenant-right dealings of old date, whether affecting town parks or positive farms. It was the opinion of many lawyers that the language of the Act was large enough to avoid these various difficulties. But the courts had decided otherwise. The remedy for the difficulties that had arisen was obvious. Let an amending Act declare that every holder in Ulster was presumptively subject to the Ulster tenant-right custom, thus leaving it to the landlord who disputed the custom to show that the holding had never been subject to the custom, or that the tenant had voluntarily parted with its benefits; let the Act declare the competency to investigate the question of fair rent directly, and to make decrees for declaration of right and specific performance; and, finally, let the Act decide that the 15th section should not apply to the Ulster custom. These amendments,—and they were not inconsistent with, if not contemplated by, the Act,—would do much to complete the large measure of justice which the wisdom of the United Parliament has bestowed upon the Irish tenantry.

A long discussion ensued, in which Sir George Campbell and others took part.

An Age of Colossi.

In the department of Anthropology, under the presidency of Sir Wm. Wylde, a paper on this subject, by Mr. J. S. Phené, F.S.A., was read, with examples, by photographs and drawings, of various colossi extant in Britain and Ireland. The author of this paper, after referring to some of the points suggested by him in a previous paper on the same subject, read by him before the British Association at their meeting at Bradford, brought forward some instances of very similar customs between the Egyptians, early people of America, and Chinese, the last being, in his opinion, the most modern; and he argued that a great similarity of treatment and worship of the Nile and the Mississippi rivers, shown by the vast similitudes found along the margins of each, indicated that the very ancient constructors of these very similar designs on both rivers had a common or similar origin; hence, that it was probable that America was peopled by Western Asian emigration prior to the central parts of Europe, or even of Central Asia, as the facility for a coast-line route would be much greater than an overland one to migratory people. He argued also from the emblems found at these distant points, common religious worship among these distant people, in the earliest times, sun and serpent worship being prominent. After giving various facts as to an *age* of Colossi, he again brought forward, amongst some of the Colossi of Europe those of the British Isles, natural as well as artificial, showing in several cases that where huge natural similitudes of the human form or countenance were apparent, there vast artificial figures (some in Britain being larger than any other representations in the world) were to be found. The giant in Sussex, 240 ft. high, that in Dorsetshire, 180 ft.—in the vicinity of the first there being a great sphinx-like head, an isolated rock, and reputed Celtic deity on the estate of Mr. Charles Hill in the same county, and the vast human and other animal semblances on Dartmoor, in the direction of the second. The great countenances in the white rocks near the Giant's Causeway appeared to have suggested similar simulation, as Pennant mentioned such a figure in the Isle of Arran, just opposite, and a great lithic representation of the human form still exists in Sligo. Other examples were given, including the Colossi of Easter Island, and of Elephanta, Ellora, and Bamian. He also showed that in consequence of the observations of Dr. Beddoe, the late president of the Anthropological Section, as to the interest attaching to the question, and the importance of ascertaining if any evidences of cremation could be found, he had been, he thought, successful in obtaining such evidences.

Natural Mythology.

Another paper by Mr. Phené, on "Natural Mythology," and some of the incentives to its adoption in Britain and Ireland, was also read in the same section.

In this paper the author carefully abstained from any of the higher kinds of even Pagan worship, which might approach to natural theology, and from the worship of animals, real or mythological, but confined himself wholly to instances of a mythological impersonation of remarkable natural objects, giving as an instance of his argument "the image that fell down from Jupiter."

A very large photograph of the "Sphinx of Egypt" was exhibited for the purpose of showing the weathering of the stone, the characteristics of which led the author to think that the original and natural condition of the rock before being sculptured into its present form, was that of a human similitude, and that this very fact had suggested the artistic labour displayed upon it. The diagrams showed a number of curious appearances of rocks in various parts of the world, some almost as like the human countenance in their purely natural condition as the "Sphinx" is at present. He showed that the localities of such objects had been sought as places of veneration, and, no doubt, for the celebration of religious, and even sacrificial rites, and around them, as on Dartmoor, which abounded in such appearances, were tumuli and barrows of the dead.

The Anthropology of Prehistoric Peru.

Dr. T. J. Hutchinson, F.R.G.S., read a paper on this subject. The paper commenced by recording how little is known up to the present of the glorious days of Peru, long before the time of the Incas; and the author conveyed his agreement with Mr. Baldwin as to the original South Americans,—notably those of Peru,—being the oldest people on that continent. He proceeded to show how little dependence was to placed on the romantic gasconading of the Spanish writers with regard to the Incas, of whose fabulous origin and mythological genealogy no account was traced by them to a period further back than about seven centuries ago, or near to the time when William the Conqueror came to England. It likewise discussed the writings of various authors of whose works translations have been recently published by the Hakluyt Society, showing them to be full of anomalies and contradictions, in the vain attempt to make the Incas be considered as the earliest civilised race of Peru. The grandeur and extent of the ancient burial-mounds was a wonderful thing. It was shown by diagrams and illustrations. The colossal work of those done by human hands—and some of them measured from 20,000,000 to 24,000,000 cubic feet,—showed what a superior race these early Peruvians must have been. The difference in *morals* as in the physique of the Peruvians and Chinese of the present day was commented upon to prove there could not have been—though supposed by very high authority—a homogeneity of origin. The author added that in the "Guide to Belfast," compiled by members of the Belfast Naturalists' Field Club, for the use of members of the British Association, the following statement was made at p. 194, under the head of "Sepulchral Monuments":—"The popular idea is that all or nearly all the old forts were constructed by the Danes, but this is quite erroneous. The greater number of our ancient national monuments were erected hundreds of years before the landing of the Danes in Ireland." Just such a popular and erroneous idea as this existed in Peru with reference to the great works there being accredited to the Incas, whereas they were daily finding out that they were erected, like the Irish forts and mounds, hundreds, if not thousands,

of years before there was an Inca in the land. He added that the process of inhumation used in pre-historic times in Ireland seemed to have been the same as in Peru.

Mr. Phené drew attention to the similarity between the mounds found in Peru and those found in the Mississippi Valley, though those in Peru are much more gigantic.

Are Brutes and Men Automata alike?

At one of the *soirées* in Ulster Hall Professor Huxley's lecture created, at its conclusion at any rate, a decided sensation. The progress of biological science was naturally with him in a master's hands. Rene Descartes was spoken of at much length, and his investigations were so keenly analysed that the lecture might not inappropriately have been called a dissertation on the eminent Frenchman's life and times. Not the least charm of the discourse was the frequency with which the Professor spoke face to face with his hearers, and with that clearness and earnestness which his students so much prize. It seemed to be assumed without a question that he would hit out pretty straight from the shoulder in defence of his friend Tyndall. The president himself hinted as much when, in introducing Professor Huxley, he described him as "A man loving truth above all things, but perfectly fearless in his utterance; a man who, though he is a hard hitter, strikes honourably above the belt, and never descends to deliver a foul blow." Towards the close of his remarks Professor Huxley said:—

So far as we know, animals are conscious automata. That doctrine is perfectly consistent with any view that we may choose to take. One very curious subject of speculation is whether animals possess souls or not. The doctrine to which I have referred is not inconsistent with the perfectly strict and literal adherence to the Scripture text concerning the beast that perisheth. Nor, on the other hand, so far as I know, does it prevent any one from entertaining the amiable convictions ascribed by Pope to his "untutored savage," that when he passed to the realms of the blessed his faithful dog should bear him company. In fact, all these accessory questions to which I have referred involve problems which cannot be discussed by physical science, inasmuch as they lie not within the scope of physical science, but come within the scope of that great mother of all science—philosophy. Before any direct answer can be given upon any of these questions, we must hear what philosophy has to say for and against the views that may be held. I need hardly say that I do not propose to enter into that region of discussion. . . . I hold that the view I have taken of the relations between the physical and mental faculties of brutes applies in its fulness and entirety to man. But, in my conviction, there is no such logical connexion as is pretended between the doctrine I accept and the consequences which people profess to draw from it. To those who do not look into these matters with candour and with a desire to know the truth, I have nothing whatever to say, except to warn them on their own behalf what they do, for assuredly if for preaching such doctrine as I have preached to you to-night I am cited before the bar of public opinion I shall not stand there alone. On my one hand I shall have among theologians St. Augustine, John Calom, and a man whose name should be well known to the Presbyterians of Ulster, Jonathan Edwards, unless indeed it be the fashion to neglect the study of the great masters of divinity, as many other great studies are neglected now-a-days; and I shall have upon my other hand among the philosophers Leibnitz; I shall have Père Malebranche, who saw all things in God; I shall have David Hartley, the theologian as well as philosopher; I shall have Charles Bonnet, the eminent naturalist, and one of the most zealous defenders Christianity has ever had, I think. I shall have within easy reach, at any rate, John Locke; certainly the school of Descartes would be there, if not their master; and I am inclined to think in due justice a citation would have to be served upon Emmanuel Kant himself. In such society it may be better to be a prisoner than a judge; but I would ask those who are likely to be influenced by the din and clamour which are raised about these questions, whether they are more likely to be right in assuming that those great men I have mentioned, the fathers of the Church and the fathers of philosophy, knew what they were about, or that the pigmies who raise this din know better than they did what they meant.

On Wild Flowers and Insects.

At another of the Ulster Hall meetings, Sir John Lubbock, bart., M.P., delivered an address to a crowded meeting "On Common Wild Flowers, considered in relation to Insects." Professor Tyndall occupied the chair. The lecturer, after some preliminary remarks, reminded his hearers that Mr. Darwin's theory is based on the following considerations:—Firstly, that no two animals or plants in nature are identical in all respects; secondly, that the offspring tend to inherit the peculiarities of their parents; thirdly, that of those which come into existence only a certain number reach maturity; and fourthly, that of those which are on the whole the best adapted to the circumstances in which they are placed are most likely to leave descendants. Now, applying these considerations to flowers, if it is an advantage to them that they should be visited by insects (and that this is so will be presently shown), then it is obvious that those flowers which, either by their larger size, or brighter colour, or sweeter scent, or greater richness in honey, are most attractive to insects, will *cæteris paribus* have an advantage in the struggle for existence, and be most likely to perpetuate their race. Every one, however, who has watched flowers, and seen how assiduously they are visited by insects for the sake of honey, will admit that they must often transfer pollen from the stamens to the pistil; in many cases from the stamens to the pistil of the same flower; but in others from the stamens of one flower to the pistil of another. This we will call cross-fertilisation. I will not now enlarge on the importance of this cross-fertilisation, which has been fully proved by experiment. Sir John then called attention in detail to some of our common wild flowers, in order to show how beautifully they are adapted to profit by the visits of insects, and how the various parts are arranged so as to favour not only the transfer of pollen from one flower to another, but also its deposition on that part of the pistil which is especially prepared for its reception. He drew particular attention to the orchids, to which curious branch of the vegetable creation Mr. Darwin had given great attention, and showed the remarkable adaptation of the organism of the plants to the movements and habits of insects. Close study of the relationship between wild flowers and insects induced the belief that while the cowslip is fertilised chiefly by bees by day, the primrose is fertilised by moths at night. Many flowers close their petals during rain, which is obviously an advantage, since it prevents the honey pollen from being spoiled or washed away. Everybody, however, has observed that even in fine weather certain flowers close at particular hours. This habit of going to sleep is surely very curious. Why should flowers do so? In animals we can understand it; they are tired, and require rest. But why should flowers sleep? Why should some flowers do so and not others? Moreover, different flowers keep different hours. The daisy opens at sunrise and closes at sunset, whence its name, "Day's-eye." The dandelion (*leontodon taraxacum*) opens at seven and closes at five; *arenaria imbra* is open from nine to three; *nymphæa alba* from about seven to four; the common mouse-ear hawkweed is said to be awake at eight and go to sleep at two; the scarlet pimpernel (*anagallis arvensis*) to wake at seven and close soon after two; while *tragopogon pratense* opens at four in the morning and closes just before twelve, whence its English names, "John go to bed at noon." Farmers' boys in some parts are said to regulate their dinner by it. Other flowers, on the contrary, open in the evening. Now, it is obvious that flowers which are fertilised by night-flying insects would derive no advantage from being open by day; and, on the other hand, that those which are fertilised by bees would gain nothing by being open at night. Nay, it would be a distinct disadvantage, because it would render them liable to be robbed of their honey and pollen by insects which are not capable of fertilising them. I believe, then, that the closing of flowers has reference to the habits of insects. Some of those flowers which attract insects by smell emit their scent at particular hours; thus *hesperis matronalis* and *lychnis vespertina* smell in the evening, and *orchis bifolia* is particularly sweet at night. I have been good-humouredly accused of attacking the little busy bee, because I have attempted to show that it does not possess all the high qualities which have been popularly and poetically ascribed to it. But if scientific observations do not altogether support this intellectual eminence which has been ascribed to bees, they have made known to us in the economy of the hive many curious peculiarities which no one had ever dreamt of, and have shown that bees and other insects have an importance as regards flowers which had been previously unsuspected. To them we owe the beauties of our gardens, the sweetness of our fields. To them flowers are indebted for their form. Not only have the brilliant colours, the sweet scent, and the honey of flowers been gradually developed by the unconscious selection of insects, but the very arrangement of the borders, the circular roads and radiating lines, the form, size, and position of the petals, the arrangement of the stamens and pistils are all arranged with reference to the visits of insects, and in such a manner as to ensure the grand object which renders these visits necessary.

We will end while we are amongst the flowers.

SUBJECTS FOR PAPERS.

THE INSTITUTION OF CIVIL ENGINEERS.

THE Council are seeking to improve and enlarge the publications of the Institution. As one means to that end, it has this year been thought desirable to prefix to the list of Subjects for Papers, now published, a statement of the nature and amount of the funds at the disposal of the Council for rewarding the authors of meritorious communications. It is hoped that this may induce the members (of all classes) and others to prepare and present careful and complete memoirs suited for discussion, as well as shorter papers, or notes, on various professional topics, for record in the Transactions, but not necessarily for reading or discussion at the meeting. Beyond these two divisions of original matter, it is intended to add abstracts of some of the more important essays published by analogous societies abroad, and in foreign engineering and technical journals of repute and standing. If the members will aid the Council by pointing out to the officers of the Institution reliable sources of information, and by occasionally contributing digests of articles from the periodicals referred to, it is thought that it may be possible to produce a quarterly volume, and in that way to put the members in possession of the details of engineering progress in all countries.

THE SHOREDITCH TO OXFORD-STREET IMPROVEMENT.

SALE OF BUILDING MATERIALS.

As a preliminary to the new street which is about to be constructed from Shoreditch to Oxford-street, the materials of forty-two houses, shops, and business premises were sold by auction on Tuesday last, which will fortunately secure the removal of a number of the most dilapidated and unhealthy dwellings in the east of London. The property sold included the materials of six houses and shops on the east side of Curtain-road, the site upon which they stand being required for the proposed improvements. Also about twenty tumble-down hovels at the rear of the before-named houses and shops, situated between Curtain-road and High-street, Shoreditch. Those miserable dwellings situated in King John-court, Crown-court, and Wood's-buildings, dark and narrow alleys, are about as wretched-looking tenements as are to be found in the East End, and altogether unfit for human habitation. Another portion of the property is situated on the opposite side of Curtain-road, and in Susannah-row. It consists of six houses and shops of a superior character, three stories in height, and only recently erected. Their demolition, however, is necessary, as the line of the intended new street intersects them. In addition to the last-named houses and shops, the materials of six houses in Willow-walk, and a public-house and two houses in Tabernacle-square, situate between Curtain-road and the junction of the intended new street with Old-street, were also sold. A second sale of the materials of several other houses in the neighbourhood will take place towards the end of the present month.

Oxford Main Drainage. — The Oxford Local Board, at their meeting of Wednesday last, have resolved to proceed with the construction of the outfall sewer, and other works, from plans prepared by Mr. W. H. White, their engineer.

VASE FOR THE PARIS OPERA HOUSE.

THE Sèvres Vase represented by the accompanying engraving is in the Exposition of National Manufactures now open in the Palace of Industry, Paris. It was designed by M. Garnier, architect, and is intended to stand in the saloon of the new Opera-house.

The saloon is a large rectangular room, 160 ft. long and 40 ft. high. It is lighted by five windows looking on the boulevard, and is terminated at each end by a small square room. The ceiling is divided into one rectangular and two oval divisions, the general idea of the painted composition being the union of melody and harmony, personified by female figures entwined, and rising to the clouds. To the right of the group is Poetry, seated on Pegasus, and waving her lyre. On the left, Glory floats in the air, bearing the attributes,—the crown and trumpet.

VASE FOR THE SALOON OF NEW OPERA HOUSE, PARIS.

Designed by M. Garnier.

NOTES ON PUBLIC WORKS AND BUILDINGS ABROAD.

SOME interesting information upon this subject is contained in several Foreign Office reports which have just been published. We first get particulars regarding public works, &c., in Egypt. At Alexandria there has been erected a large building for the purpose of a produce-market and exchange, and it is found to be a great benefit to the commercial community. The building is described as a large and handsome one, not devoid of architectural pretension; and, in fact, it is mentioned that few cities in Europe can lay claim to the possession of a more commodious produce bourse. The total sum expended upon the construction of the building was 25,000*l*., and it yields an annual rental of 5,000*l*. Another matter which is receiving the attention of the authorities of Alexandria is the imperfect drainage of the place, the consequence being that fevers are prevalent, and must continue to be so until the system of drainage is altered and rendered less defective. Another cause of illness and disease is the bad style in which many of the houses are constructed; but it is to the credit of the Khedive that he shows a great desire to introduce reform in this direction. It is to be hoped that he will succeed. Railway construction in Egypt is also progressing favourably. An important line is being constructed from Alexandria to Embabeh, opposite Cairo, on the left bank of the Nile, in order to avoid the necessity of erecting a very costly bridge at Cairo, and to convey the produce of the Soudan direct to the sea. Another new line,—from Dessonk to Shirbeen, a distance of 58 miles,—will considerably shorten the journey between Damietta and Alexandria; and a canal will be formed along the length of the line, which is expected to be of great use. Important harbour works are also approaching completion at Alexandria. A large breakwater has been constructed, and the inner mole run out to within a short distance of its entire length of 980 yards. The mole is intended to be more than 100 ft. broad. It is designed to form quays from the railway to the Custom House, but it has been found necessary to abandon the idea of having perpendicular quay walls, alongside of which vessels could lie, owing to the great difficulty of getting a proper foundation, there being 40 ft. of mud; consequently the walls will be roughly formed of rubble and stone, and iron piers will be run out at intervals. The contractors for the harbour works are Messrs. Greenfield & Co., and it is thought that they will be entrusted with the execution of a scheme which is under discussion to widen and deepen the entrance, so as to enable vessels to enter at night, and in any weather. From Port Said we also get some information as to public works there. With regard to the Suez Canal, it is stated that no difficulty has been experienced in keeping up the requisite depth of water in the canal, and that the principal danger the company has to contend against is the silting up of land at the entrance of the harbour of Port Said. To the westward, or outer side of the western mole or breakwater, the sand gains annually on the sea about 30 yards, whilst a considerable quantity filters through the breakwater and forms on the inner side. The company having discovered that a bank was forming to the westward of the entrance channel, procured from Marseilles a very powerful steam-dredge, in order to keep the entrance channel clear. It having also been decided to lengthen the western mole by 600 mètres,—at which distance hard ground will be reached at a depth of five or six fathoms,—the Canal Company have re-opened the concrete works of Messrs. Dasseaud, where the blocks of which the mole was constructed were manufactured, and which establishment, since the opening of the canal, has been closed. These works are now employed in fabricating blocks, and it is anticipated that the whole construction of the mole will probably be completed in from two to three years. When finished it will measure 3,100 mètres in length. Stones procured from the islands of the Grecian Archipelago are much used in the work. It is further mentioned that the Canal Company intend at a future date to considerably enlarge the harbour of Port Said, which is at present capable of containing from fifty to sixty large vessels. With regard to the town of Suez, the reports do not give very satisfactory intelligence. The town remains in a very neglected condition, and local officials, sanitary or other, show extremely little inclination to attend to the cleanliness or salubrity of the town. A great number of pilgrims congregate there in the open spaces, and no arrangements whatever are made for removing the *débris* and filth which accumulate, and it is mentioned that while the Khedive has been induced to spend many thousands of pounds in building and dredging a spacious wet dock, which is useless even for his own steamers, the authorities make no effort to improve Suez, which seems to be treated as though it were not part of the dominions of the Khedive; and, according to the opinion of an authority upon the subject, "unless some European can manage to make a 'plant' on the Viceroy in the shape of a contract, Suez does not seem to be worth the attention of the Egyptian Government."

We learn from Bahia (Brazil) that great enterprise has been there manifested in the introduction of street railways, which now run in nearly all parts of that city, and which are found to be a great convenience to the public, the more especially as Bahia, being very hilly, locomotion is alike costly and exhaustive. As a necessary complement to the street railways, and in order to avoid the extreme gradient of the principal hill of the city, a powerful hydraulic elevator has also been introduced, and is largely used. From Carthagena (Colombo) we learn that it is expected that something will be done ere long to rescue that city from its present state of isolation. Several projects are consequently on foot for opening the Dique canal to steam navigation. The Government of the State, to whom the Dique belongs, offers an exclusive privilege for fifty years and a guarantee of three per cent. on $300,000 for twenty-five years, and the National Government a guarantee of seven per cent. on the same amount for a like period, to any company which would undertake the work. An English engineer has estimated the expense at which the canal could be opened for steamers of 500 tons capacity at 18,000*l*., including the hastening of the present route, by cutting through the angles, from 116 to 81 miles. This estimate, however, is considered under the mark, as it does not include the cost of dredging-machines, &c. A total sum of 50,000*l*. is considered by competent judges amply sufficient for all purposes. From Panama (Colombia) we also learn that the repairing of the cathedral there (which is the only public work in which the Government is engaged) is nearly finished. Building operations, generally speaking, have been pretty active of late in that city, inasmuch as many of the private residences have been repaired and rebuilt, the architectural appearance of the city being thus considerably improved. With regard to public works in Costa Rica, there is nothing of much importance to note. It may be mentioned, however, that in 1871 the construction of a railway was commenced from Alaquela to Limon, a distance of 114 miles; and the line was to have been completed in three years. Not only is there no hope of its being finished for some time to come, but doubts exist as to whether it will ever be finished at all. This want of success in the construction of the line is attributed to the useless waste of funds in having commenced the work in the interior, thus having to pay enormous freights on all the rails, &c., and also to the lack of integrity of the persons through whose hands the money has passed. More capital is now required, and it is stated that unless more funds are forthcoming the line cannot be finished; and it is difficult to see how the Government will be able to pay the interest and sinking-funds on the loans already obtained.

Relative to public works in France, it may be noted that Mr. Consul Hotham, writing from Calais, states that as regards the submarine tunnel between that port and Dover, this stupendous work will doubtless eventually be constructed, in which case the question as to the

best kind of vessel to be employed will be set at rest, and breakwaters, dredging-machines, narrow harbours, floating sands, &c., will be things of the past so far as international communication in that channel is concerned. The same writer also mentions the proposal of a scientific French gentleman to prolong an iron pier and breakwater into the sea at Calais, and he mentions that, should this plan be carried out, vessels of considerable dimensions would doubtless be able to lie alongside in all weathers.

From St. Malo we learn that important public works have been constructed at the ports of St. Malo and St. Servan, with a view of forming a floating wet dock, approved by the French Government in 1870. The advantages of such a wet dock have been waited for with the more anxiety, inasmuch as of late years many important works have been executed with the intention of converting into a floating wet dock all the bay which separates the towns of St. Malo and St. Servan, in conformity with various laws and decrees, granting in all the sum of 748,000*l.* for that purpose. It is stated that the engineers have yet to furnish a definite plan, and should they be able to restrict themselves to the amount of the first estimate, the expenses yet to be incurred may amount to (say) 320,000*l.*,—a sum which, as is justly observed, must be a great sacrifice for the French Government in the present state of affairs; but at the same time it would give the ports of St. Malo and St. Servan a floating wet dock, on which more than 680,000*l.* have been already expended.

With regard to public works in Russia, we get some interesting information from Taganrog. Amongst the buildings being erected there is a large new school, which is in course of construction by the municipality, for the instruction of female scholars. Important works for the construction of a new mole have been finished at the port so far as regards affording security to steamers, barges, &c., employed in the coasting trade; other collateral works, however, are not yet completed. Attention is drawn to the fact that Taganrog is a rising port, showing signs, in some respects, of material progress, although in others being behind the times. Projects for supplying good water to the inhabitants have not made so much advancement as was expected. The establishment of a public slaughter-house is contemplated; but the roads and pavements remain in a deplorable state of neglect, no hopes being seriously entertained of amendment, unless the lives of some eminent councillors are endangered. Then, it is thought probable that reform may be introduced. With regard to the trade and industry of Taganrog, it is worthy of note that of late buildings there have been erected on quite a gigantic scale for the manufacture of bricks, tiles, &c., in which a good business has been done.

The reports from Porto Rico reveal the existence there of a not very satisfactory state of things. In fact, it is stated that, during the past year, nothing could exceed the neglect with which all public works have been treated. The fine Macadamised road from the capital to Cagnes, twenty-five miles in length, once the pride of the island, is now as rugged as an African track; the gas of the town is irredeemably offensive; the telegraph wires and posts are in a state of inefficiency, while railways, irrigation, and drainage, still remain matters of distant speculation. From another Spanish town,—Barcelona,—we get somewhat better news. The condition of that port has very greatly improved of late, and the works commenced for the amelioration and deepening of the harbour have been carried on without interruption, in order to render it perfectly safe and commodious for all kinds of vessels.

Utilising Refuse Lime from Gasworks.—Mr. G. H. Forbes, clerk in orders, rector of Broughton, Northampton, proposes to combine the foul lime of gasworks, or its equivalent, with coke, with or without chalk or limestone, with or without bituminous substance, and with or without hydrocarbon oil or spirit. The compound is burnt in a grate or stove, and when sufficiently burnt is reduced to powder for use as cement or plaster, or artificial stone. He also proposes to form a compound of the foul or refuse lime of gasworks, or its equivalent, with coke, coal, or cinders, with or without bituminous substance, oil, and vegetable matter, and to combine the materials in such a manner that the compound may be used as fuel in any stove or furnace.

CUMBERLAND AND WESTMORELAND ARCHÆOLOGICAL INSTITUTION.

THE Cumberland and Westmoreland Antiquarian and Archæological Institution held their second meeting and excursions of the season at Carlisle. The rendezvous was in the Castle-square, where Dr. Simpson stated the order of business.

Mr. Richard S. Ferguson took under his charge the large party of ladies and gentlemen who had assembled, and conducted them to the "Tile Tower," at the west end of the Castle Green, and there read a description of it, forming part of a paper upon the Castle, which he had prepared for the occasion. During the reading of the description, and afterwards, many of the visitors entered the tower, and examined it for themselves. It was found that part of the moulded brick arch referred to by Mr. Ferguson had given way during the last few days, and arrangements were at once inaugurated for restoring it, Mr. Whitwell, M.P., having offered to bear the expense of doing so. From the Tile Tower the company proceeded to the site of the draw-bridge, where Mr. Ferguson commenced his description of the Castle itself.

Mr. Ferguson expressed his thanks to Mr. George T. Clark, F.S.A., and to ourselves for permission to use Mr. Clark's account of Carlisle Castle in the *Builder*.

Captain Gage, of the 34th Regiment, read a short narrative of the services of that gallant regiment; and Captain Osborne read a narrative of the services of the 55th Westmoreland Regiment, which, he remarked, had been prepared by Quarter-Master-Sergeant Noakes, from the records of the regiment and from different memoranda of his own. Reports of these and other proceedings at the meeting appear in the local *Journal* of the 14th inst.

Before the meeting separated, Dr. Simpson suggested the desirability of sending to the proper authorities at the War Office a representation respecting the proposed alterations in the Castle, expressing a hope that while the ancient remains should be preserved the ground would not be so encumbered with new buildings as to diminish the interest in one of the most interesting buildings in Carlisle. This was agreed to unanimously.

In the evening the members and their friends repaired to Morton, where Mr. Ferguson, M.P., held a *conversazione*.

On the second day, Thursday, the members of the Society met at the Cathedral at ten o'clock, and attended divine service. There was again a considerable attendance, including many ladies. After divine service an inspection of the Cathedral was made, and afterwards the party paid a visit to the tithe barn near St. Cuthbert's Church. A brief interval was allowed for luncheon, and then carriages were ordered and an excursion made to High Head Castle, Rose Castle, and Dalston Hall, at each of which places a paper was read. Rain fell heavily, and marred to no inconsiderable extent both the enjoyment and the instruction to be derived from carrying out the seemingly pleasant programme. The outside of none of the places visited could be examined with any comfort, and it was accordingly left undone.

A YEARLY RECORD OF SCIENCE, AND A YEARLY RECORD OF ART.

PROFESSOR TYNDALL, whose capital address all by this time must have carefully read, has faithfully kept up the "programme" of the British Association for the Advancement of Science, and has given us a broad and general idea of the progress "science,"—to adopt that most comprehensively general word,—during the past year has made, and its present position, both *per se* and in its relation to other regions of thought and of human interests. It is only proper that this should be done, and that the world should know precisely how matters so interesting to it do really stand. The British Association for the Advancement of Science does this, and the world has good reason to thank it for the timely work it accomplishes. It must always be good to know precisely whereabouts we stand, what the past has done, and what in all probability the future is most likely to bring forth, and to do. Of "science" we do thus get year by year some really intelligible notion; and it does seem somewhat strange that there has been no such general and comprehensive means of ascertaining more or less authoritatively what the present is, and what the probable future will be, of fine art generally. It would be a thing of no small benefit, not a little useful to artists everywhere, and not less, we are quite sure, interesting to the public. We beg to be understood. We, of course, bear in mind all that is done, and done well, for the most part, by the many already-existing art, and architectural, and archæological societies and associations; but they, for the most part, busy themselves with specialities and details peculiar to each one of them, some even confining themselves strictly to one special style of art or architecture. And it is as well that this should be so. But what we here intend is not specialities and details only, which must, of course, be included anywhere, but a broad and general idea, and retrospect, and prospect of art generally and universally; indeed, like the science-survey, all comprehensive, and everywhere, as far as it can be done or is possible. It is not a little curious to see how things are, and are suffered to go on, and how much at times is missed. The subject, broad as it is, is, we trust, worth a few reflections and, perhaps, a hint or two in passing.

Well, then, in the first place, it is quite certain that no sort of chaos, which can be contemplated in nature, can well be more chaotic than that of art, as it now-a-days manifests itself. We do not mean by this more than that all kinds of art have, in a sense, rushed together, and got mixed up with each other, in the production of most objects of daily utility, and commonplace "ornamentation"; and that you may find in some of the commonest things, and in the cheapest as well as most costly objects a perfect chaos of details,—and, there is really no other word, of *discordances*. There surely never was a time in which a general view periodically of all fine art was more needful; and most curious would it be to witness the skilful analysis and resolution of any special to-day object by a master hand, into its component parts, and with a reference to all the sources from which it had, perhaps, unconsciously come. This would really be treating fine art as a science, and in a scientific way, "accounting for it." Surely this would be helpful very many ways, and might lead to much that is now unthought of.

No one, we presume, will dispute the usefulness and interest here to be found. It would be sure to bring into prominence the nature, and, maybe, the origination of the primitive styles of art, whether of architecture or of common objects. It would help to resolve things artistic into their component "atoms," and we might in time come to see, though but vaguely, perhaps, into the *causes* which gave birth to the original types of art,—a subject hardly yet even attempted. We might call this, borrowing from science, the "atomic theory" of fine art, or, the endeavour to find out how and out of what materials art has in each case sprung. We might even call upon Democritus, and try to imitate him in his uncompromising antagonism to those who are inclined to reduce the phenomena of art to caprice and mere accident. From nothing we might, from this scientific point of view, and following our old Greek, say, nothing can come. Nothing, even in art, happens by chance, not even the coming into actuality of *ornamentation*, as we sometimes behold it, everything having its cause. We might even go further and call upon a man of more fiery and poetic nature, and contend, with no small truth, that there is inherently among the component parts, or "atoms," of art forms, a "love and a hate" which accounts for their combination or their non-combination. Thus might the analyst get from Epicurus a furthering hint, and learn much from his quiet thinkings in his Athenian garden. Science may well be followed,—there is no fear that science will have it all to herself; for, as the Professor hereabouts says, man never has been, and he never will be, satisfied with the operations and products of the *understanding* alone. Physical science cannot cover all the demands of his nature. Art, and imagination, and fancy, and even what are termed trifles, are equally needful at times. We might even go farther, and learn of the old Greek philosophy and science another mighty fact, not a little needful to learn in these days, of capital on the one hand, and labour on the other, that by the internal light, and guidance of the mind alone, it is in vain to seek to transcend *experience*, commonplace experience, which so many are sometimes inclined to do. The aid of the senses is needful, and the bodily powers are needed, as "instruments" whereby to produce a true result. It is wonderful to find how truly and practically

the old Greek of the antique Past, now so far from us, saw into the inherent truth and necessity of things. Observation with a purpose, instruments to aid the senses, scientific method, induction, and more than all, perhaps, experiment, are no new things after all!

We might then go on following the scientific order into the causes of "delay" in art progress, as is here done in scientific progress. Quite as curious a subject, and as difficult to account for, may be, more difficult. Why, says the learned professor, was the scientific intellect compelled to lie fallow, like an exhausted soil, for nearly two millenniums before it could regather the elements necessary to its fertility and strength? And why were at times even the great facts of science almost forgotten for a generation, only to be rediscovered, and applied to practical purposes?

Why, indeed? Bacon, and in recent times Whewell, tried to answer these knotty questions. May we not then with equal reason ask such questions in art as have here been done in science? We then ask how it is that Greek art—to cite but one instance—has managed to hold its superlative place through the centuries as it has done and now does? What was it that gave the antique Greek his superlative power over material? Why again has the art ground of Greece lain fallow ever since. The Greek man is alive yet, and a clever man he is in many ways, but where is his power, his special and individual power, over art, in sculpture and in architecture! The birth of art, such as the Greek, is a wonderful phenomenon enough, quite as curious as any that science can show, and as well worth the time of a special Association of talent to go into the mysteries of. The culmination of Greek art was perhaps yet more wonderful, while its death was a thing not to be accounted for. Is there any thing in fine art in these days worthy to fill the space once filled by the Greek? Where is it if it be so? If not so, why not? Subjects as full of interest as any science has to propound, and most surely as hard to get to the bottom of; needing, in fact, a British Association in all its strength to tackle.

There would, indeed, be no need of subjects. If it be useful in science to compare Goethe and Aristotle, and to create, as the Professor at Belfast did, the Stagirite with powers well nigh superhuman, and to say of Goethe, with all his additional lights, that even he was "incomplete"; might we not say in art that Phidias, looking at the work he did, must have been himself all but superhuman in power over the dead and formless material; and then, comparing him with others, wonder how it is that they are so "incomplete" as they are. Between the means of the sculptors of modern days and the sculptors of old Greece there is a millennium of years. What a distance is there between the works they have severally produced. What new aids are needed, what new system of high art education, what new material, what new and improved surroundings, and ways of work? What new system of art action is needed to enable the modern man to rival, if not to excel, his antique prototype?

Indeed, might we not pursue this comparison between the course of science, as so ably developed by Professor Tyndall, into not a few interesting and instructive details? In science, as he shows, there have been periods of astonishing fertility of thought, almost creative thought, and there have been periods of well-nigh total eclipse, wherein this science seems to have been well nigh forgotten, or to have at least retired into remote and almost forgotten byways. Surely it has been the same in art and architecture. There are difficulties here indicated enough to account for in science, but not a wit the less so are there in art; and might not art benefit as much by some special means of finding these out, or at least of specially talking about them? A special looking after the advancement of art, in this inquiring sense, we cannot but think might be not a little useful, and would not certainly impinge upon the special work of existing organisations, or the work that is now so actively pursued.

We are here only pointing to some of the curious work and problems indicated by the progress of science, and by the yearly record that is made of it. All the sciences are in turn passed under review, and constant reference made from one to the others. We know whereabouts we are, and to a certain extent we know what to attempt next; and more,—an important point indeed,—whereabouts the *deficiencies* are. In art, as we know, there are not a few complicated phenomena. A number of elements are separated, and yet they are one, for they all meet together under the same roof. Painting, sculpture, and architecture, and "common objects" are perpetually coming together, and the world would be glad to know year by year how they agree, and whether and how *style* rules them, and whether year by year "Progress" is made in them. Are they all going at one uniform pace, or is one outstripping the others, and getting the better of them. We scarcely know which to take first, so crude is the subject matter. The present state for example of "ornamentation," to use that somewhat awkward word, is it better, or not so good, as the past ages produced? Is it advancing, and if so, in what direction? What an amount of work there really is if we but come to think about it seriously for a moment. A vast Association might well find its work here, and might, may be, find a positive relief now and then even in a little abstract primitive, and even "atomic" science. But, slow and sure would be the best, and in a careful collocation of facts, scattered about as things are everywhere, and in logical deductions from such facts, would the real strength and usefulness be best and most surely found.

PARIS NOTES.

ONE of the most serious consequences of the last war, and the pacific revolution it brought about, was undoubtedly the utter ruin of several financial and industrial associations, which were creating, or about to create, busy cities and factories in many almost deserted parts of France. They had proved their power by raising the fashionable seaside colony of Deauville in less than two years, and by quadrupling in some six months the number of houses at Arcachon. A company, known as the Compagnie du Commerce de France, had undertaken the construction of a bathing station at Saint Nazaire, a few miles from Nantes. It was to be called Nouvelle Ville, and, in the opinion of the directors, was destined to become a thriving faubourg of the central city, Nantes. Each director was to have a villa, and several other advantages were offered. But the rule of the Septennate is not favourable to enterprise such as this. The forced sale of 420,000 mètres of land belonging to the company took place on the 20th ult.; the buildings already erected went for 700,000 francs; and on the 28th another company of the same kind foundered, selling the bathing town it was about to establish at Cabourg, Calvados, in nineteen lots, each of which fetched on the average about 9,000 francs.

Placed beside these and many other records of ruin that could be named, the project of the Paris budget for 1875 is an instructive document. The ordinary expenses are not interesting: they are scarcely met by the ordinary revenue, and are occasioned by mere administrative exigencies. It is in the chapter devoted to *dépenses extraordinaires* that we can see what the civic authorities intend to do for the building trade, and the 35,000 workmen employed in it, during the coming year. There is, firstly, a sum of 400,000 francs allotted to the service of reconstituting the archives and registries burnt under the Commune. Half a million is destined to charitable works; that is to say, the reparation of the hospitals of Saint Louis, Saint Antoine, La Pitié, the Salpétrière, Bicêtre, &c. Another half-million represents the contribution of the city towards the cost of two bridges; 400,000 francs are set apart for the continuation of the artesian wells of the Place Herbert and the Butte aux Cailles; while 300,000 francs are consecrated to the construction of new galleries for spring-water. The architectural service,—one of the most important items under the Empire,—may count upon a subvention of 3,400,000 francs, to be divided between the Chaptal and Rollin Colleges, the Hôtel de Ville, the Théâtre Lyrique, and other municipal properties. The total of extraordinary expenses is estimated at seven millions.

The Comte de Paris is the proprietor of the old Château d'Amboise, and the reparations he is having executed have resulted in an important discovery. Some labourers at work in the pleasure-grounds met last week with a stone of considerable dimensions. It was dug up with care, and when brought to the surface was discovered to be a gravestone. An inscription cut in the stone was finally deciphered. It contained the name of Leonardo da Vinci. The architect telegraphed to the Comte de Paris, who ordered the vault to be opened in the presence of a committee of *savants*, when the body of the famous painter was discovered in a state of perfect preservation. Da Vinci is known to have died in the vicinity of Amboise, but his resting-place has hitherto remained a mystery. The skeleton has been placed in a coffin lined with lead, and will be preserved in the chapel of the château.

The exhibition of Baudry's frescoes destined to ornament the new Opera-house opened on Thursday, at the École des Beaux Arts. There are three ceilings: that which is to occupy the half-circle of the cupola of the auditorium represents Apollo bestriding Pegasus, and followed by Music and Poetry, with Fame tendering the palm of immortality. The second ceiling is occupied by the Muses, to whom Apollo descends from his chariot, half-turning aside to offer his lyre to the Graces. The third ceiling is the apotheosis of Homer surrounded by the poets and artists of all countries and epochs, among which may be discovered the painter's own portrait and that of the Opera architect, Garnier. Then follow the monster mural pieces: St. Cecilia (Baudry has drawn largely from sacred history), Catholicism represented as the origin of modern music, Salome dancing before Herod, David with the harp, &c. There are also eight medallions of children,—two mètres in height,—playing the different instruments of antiquity and civilisation. M. Baudry is a wit as well as a painter. When asked how he would represent English music, he answered,—"In the figure of a fool, who plays and thinks he understands,"—and he has kept his complimentary promise. Ireland and Scotland, however, are represented with the harp, jig, and bagpipes. The result is generally esteemed very poor for eight years of unceasing labour.

HOTEL AND SHOPS, HOLBORN VIADUCT.

THIS building is situate at the most easterly extremity of the Holborn Viaduct, opposite St. Sepulchre's Church, and immediately adjoining Holborn Viaduct Station of the London, Chatham, and Dover Railway. The position it occupies is very commanding, having three frontages, facing "The Viaduct," Newgate-street and Old Bailey, and Green Arbour-court, the side entrance to Holborn Viaduct Station.

The ground-floor (over which the hotel is built) with the exception of the double entrance to the hotel, the bar, and the restaurant, is all occupied by shops.

On the first-floor there are handsome coffee and commercial rooms, reading-room, several sitting-rooms, cloak-room, serving-room, lifts, w.c.s, and lavatories.

On the second-floor are billiard and smoking rooms, thirteen bed-rooms or sitting-rooms, lifts, w.c.s, lavatories, &c.

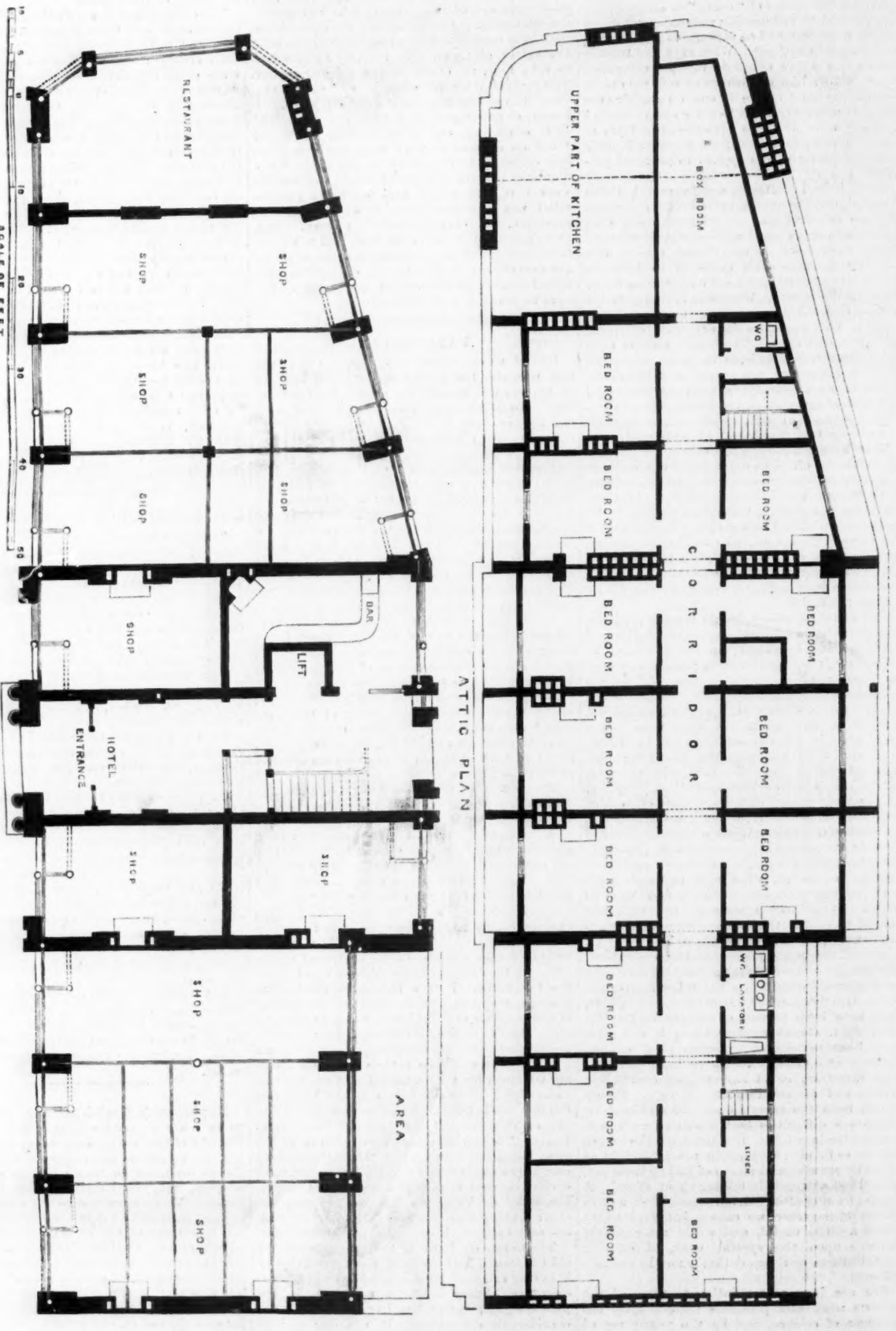
On the third, fourth, and fifth floors there are fifty-one bed-rooms, with a sufficient number of lavatories, and so forth, on each floor.

On the sixth floor, large kitchen, scullery, larders, still-room, housekeeper's room, pantry, plate-room, housemaid's-room, servants' hall, bakery, china and store rooms, knives, linen-room; and

On the seventh floor, thirteen bed-rooms and box-room.

The building is being erected for the Association of Land Financiers, No. 7, Whitehall-place, by Mr. James M'Lachlan, under the architect Mr. E. Evans Cronk, of Cockspur-street, Charing-cross. Mr. Thomas Chapman is foreman of the works.

Hopkinson's Sash-Fastener.—This seems to us a really good invention. A sash-fastener must be of that simple form which can easily be put into use, either for securing or opening; and the action must be that which is universally adopted, viz., by simply turning round the handle. There must not be any secret or complicated parts to be put in motion, nor more than one movement of the hand necessary either to secure or open. Hopkinson's patent sash-fastener now before us fulfils all these requirements. It is the ordinary sash-fastener, but the arm has on its left side a projection, which, when the windows are secured, is immediately behind the opening between the sashes, and instantaneously wedges up any instrument pushed up from the outside to open the fastener. It is without any complicated parts to get out of order, or to be broken by the force that thieves use. The price is the same as that of the common fastener, and it certainly seems to us a capital invention. Messrs. Tonks & Sons, of Birmingham, are the makers.


RESTAURANT
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GROUND PLAN
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BOX ROOM
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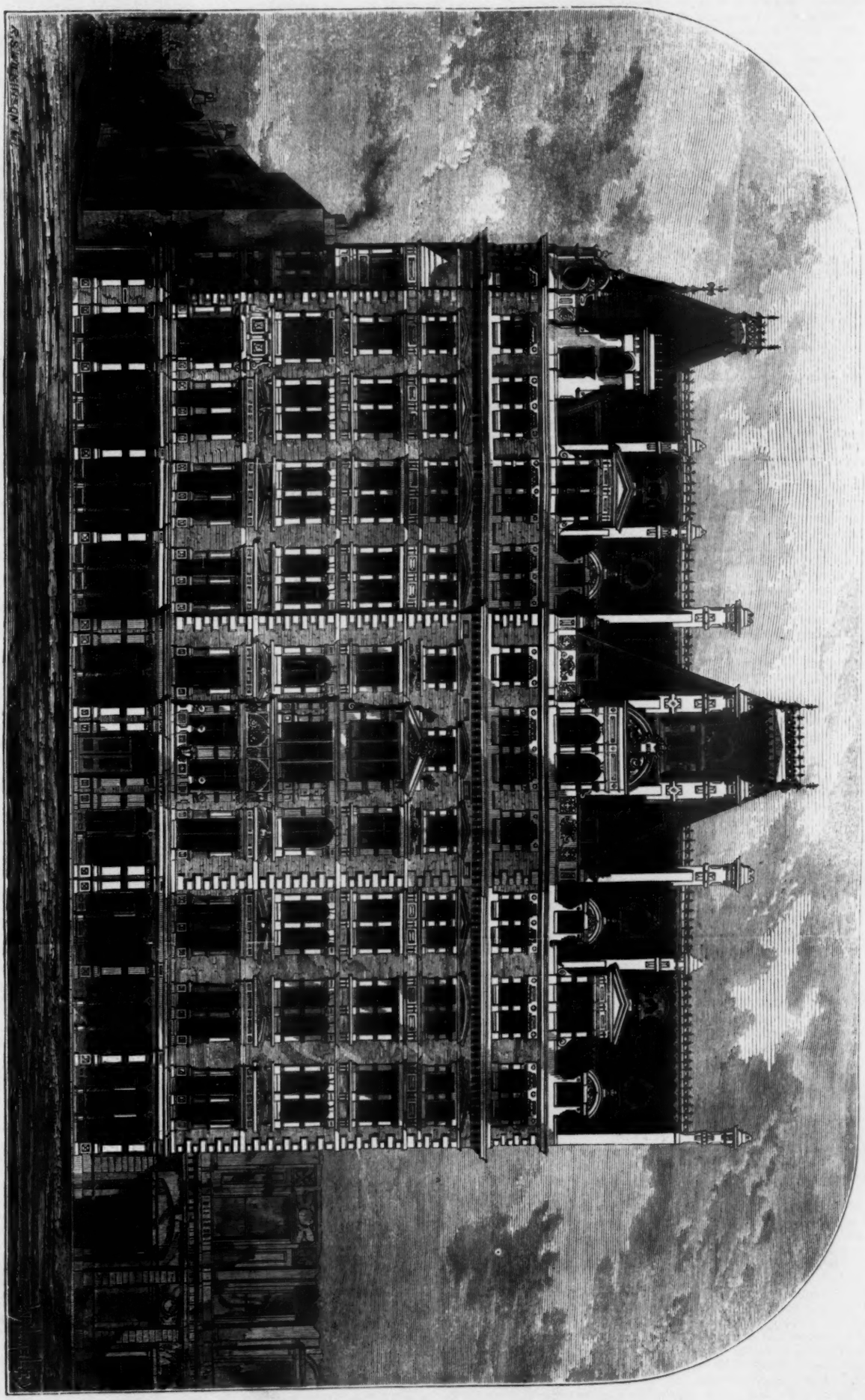

HOTEL AND SHOPS, ON THE HOLBORN VIADUCT.—MR. E. EVANS CRONE, ARCHITECT.

THE FUTURE MAINTENANCE OF ENGLISH CATHEDRALS.

THE proceeding of the Ecclesiastical Commissioners, in taking under their management Capitular Estates, has caused some anxiety with regard to the maintenance of the cathedrals. Hitherto, the Dean and Chapter of cathedrals have been the sole arbiters of what was requisite in rebuilding, restoring, and cleansing of abbeys, cathedrals, and capitular structures,—acting, of course, under the advice of architects and their clerks of works.

It is no secret that in too many instances our ancient cathedrals and churches have been suffered to fall into decay by parsimonious "chapters," and that "the hat has to go round" to restore edifices which should never have required the subscriptions of laity. It remains to be seen if the "new broom" will sweep cleaner than the ancient chapter besom; and it is likely to be first tested on Ripon Cathedral, for its Dean and Chapter have just transferred their estates to the Ecclesiastical Commissioners for England, in consideration of an annual payment of 6,000*l*., "until such time as they may be re-endowed with estates in possession calculated to produce that sum annually."

No surplus is likely to accrue out of the revenues of the Chapter of Ripon. When the collegiate church was made, in 1842, the cathedral of the new see of Ripon, the chapter was fixed at a dean and four canons, with incomes of 1,000*l*. and 500*l*. respectively.

In order to provide these sums, and to secure adequate provision for the services of the church and the maintenance of the fabric, it became necessary to supplement the chapter revenues by an annual payment of 3,300*l*. out of the funds of the Ecclesiastical Commission.

The annuity of 6,000*l*., now payable, is in substitution of this sum, as well as in consideration of the transfer of all the estates of the chapter, with the exception of the cathedral, with its graveyard and the diaconal and canonical residence houses.

The present Ripon Cathedral establishment consists of a dean and four canons, who form the chapter, among whom one-half of the annuity is divisible; two minor canons, who also discharge, as joint vicars, the parochial duty of the parish of Ripon; an organist, six lay clerks, eight choristers, two vergers, a sexton, an assistant, and an organ-blower. These latter absorb, with the maintenance of the fabric, the remaining 3,000*l*.

It will thus be seen that the new scheme still mixes up clerical salaries with architectural necessities, so that it is difficult to set aside a stated yearly apportionment for building works.

MELBOURNE.

TENDERS for the erection of the new public offices, Eastern-hill, have been called for. The buildings will be erected in accordance with the plans prepared by Mr. M. Egan, architect, whose design was chosen by the Government out of the number sent in in the public competition over a year ago. Alterations have since been made in the plans. The new offices will be erected on the foundations at the rear of the Treasury buildings, and it is intended to concentrate within them all the various public departments now scattered over the city. These include the Public Works, the Crown Lands, the Crown Law, the Mining, the Water Supply, the Treasury departments. The original plan was remarkable for the strict avoidance of any of the graces of architecture, and was severely criticised upon that ground. The architect has since, however, says the *Argus*, been at pains to remedy the objection, and several alterations have been introduced with the view of rendering the appearance of the structure more in accord with the requirements of the public taste. It has been decided to add an additional length of 72 ft. to the east wing, in order to accommodate the Yan Yean department, and to bring all the offices of the Crown Lands department on to the one floor. Extended accommodation will also be thus provided for the Public Works department. In this extension of the wing there will be constructed one large room, 50 ft. by 64 ft., the proposal being that all the officers of the Yan Yean department shall be gathered together in the one room. In the centre block the principal entrance opens into a large hall, 36 ft. wide, from which rises the grand staircase. In the original plan it was intended to have two staircases, but these have now been thrown into one. The first flight will be 9 ft. in width, and the staircase will then branch off into two flights 6 ft. in width. On each side of the entrance-hall there will be rows of columns. A portion of the hall will be screened off for messenger and telegraph rooms. The Crown Lands department will be accommodated on the first floor, the board-room occupying the centre of the building. In accordance with a practice adopted in the large public offices in England, accommodation will be provided to enable the officers of the department to obtain luncheon in the building. With this view a large dining-room will be constructed on the third floor, with kitchens and other necessary conveniences attached. The basement is set apart for strong-rooms, store-rooms, &c. There will be two hydraulic lifts for the convenience of raising stores to the different portions of the building, and tramways will be laid down in the basement. The large strong-room, in which the valuable plans of the land department will be kept, will be detached from the main building, and will be made fireproof. The windows will be closed with patent iron shutters, which can all be closed simultaneously by one movement of machinery. The above are the principal deviations from the original plan, so far as regards the internal arrangement of the building. The architect has endeavoured in several ways to improve the external appearance of the edifice, and to remove from his design the reproach of plainness which was at first cast upon it. The different stories will be divided by cornices, instead of by simple bands, and the central portion of the structure will be ornamented by rows of coupled columns, built into the walls, rising to the second floor, and finished off with large panels and vases. There will be a portico in front of the building, over which will be placed a coat of arms. In the original design the roof of the edifice was intended to be in one span, but the plan has been altered, and the roof will be in three spans, and with a greater pitch. Ventilators will be placed in the roof, which, while increasing the ventilation, will also serve, to some extent, to relieve the appearance. An important feature in the original design of Mr. Egan was the approaches from Collins-street. He proposed to construct two embankments—one from the south end of the Treasury, the other from the front of the new offices. These would be connected by an iron bridge, 150 ft. long. The idea has been adopted by the Government, but instead of the embankment retaining walls will be used. By that means less injury will be done to the Treasury gardens. The cost of the work is estimated to be about 150,000*l*.

SOMERSETSHIRE HISTORY.

THE annual meeting of the Somersetshire Archæological Society has been held in Sherborne. Mr. Danby Seymour, as president, delivered a very interesting address. Towards the close he said:—"If ever we have a really good history of Somersetshire we shall owe it probably to the interest inspired by our society and some of its distinguished members. If some gentleman in every parish were to collect the details connected with it, and accurately examine the available records and papers, describe the monuments of the past, and collect the traditions, we should soon have a body which might be worked up into a really good history of the county. The late Bishop of Salisbury some years ago requested every incumbent to draw up a short memoir of his own parish, and, I believe, many gentlemen took great pains in executing the wishes of the good Bishop, and that a valuable body of materials has been collected, which some day, no doubt, will be made use of. Our own Bishop has done us the honour of presiding over our society, and honoured us with his presence to-day, and has always shown a lively interest in our welfare. The clergy in past ages have done perhaps more for archæology than any other body of men, and Mr. Hallam places the labours of the congregations of the Benedictines of St. Maur before all the labours of the two Universities of Oxford and Cambridge put together. I know of no reason why our Protestant clergy should be less industrious than the clergy of the Catholic Church, without in any way neglecting their proper duties. They have all of them received a learned education, and I have always thought that a good public free county library was much needed, where those disposed to keep up their learning might consult the necessary works. Actuated by these views, I once, a very long time ago, gave the nucleus of a public library in Wiltshire, but no progress in this scheme has since been made. There are very few counties more interesting than Somersetshire; it is a kind of epitome of all England. There are the port and marine of Bristol; the fisheries of the Channel; the coal and other mines of the Mendip; the wild and beautiful scenery of the Quantocks; the unrivalled pastures of the Vale of Taunton, and fruit orchards which may vie with those of Kent. The taste and wealth of Glastonbury and other abbeys have made the most of the beautiful materials for building which we possess, and have left us, both in ecclesiastical and domestic architecture, edifices of consummate beauty, heightened by the charm of antiquity. Our historic souvenirs yield to those of no other country. First come the Celtic legends, which cluster imperishably round the Isle of Avalon. They relate to a people with many great qualities, and often brilliant genius, always interesting and always unfortunate. Whether their lot was to oppose the Roman, like Boadicea, or the Saxon, like King Arthur, or the Protestant succession, like Lochiel and the Highlanders, or the Spanish Republic, like Don Carlos, at the present hour, we see the same qualities and may predict the same fate. English institutions pass through a healthy growth, but w[illegible] attempt was made to check the de-ve[illegible]nt of our institutions in the seventeenth cen[illegible], Laud and Strafford had to yield to Cromwell, and the unfortunate Charles II. found refuge among faithful friends in this neighbourhood. Then we come to another hero, typical of a more successful epoch. The greater part of the history of the great Alfred is very clearly connected with our county. Then the Saxon rises and falls; the Norman conquers us for an age. From the mixture of races rises the English nation. Again, a few years later, Somersetshire is imperishably associated with the rebellion o the unhappy Monmouth, and traditions, as we know, were long preserved of the rebellion and its cruel suppression around Sedgmoor. Thus Somersetshire, from the earliest to the latest times, has had her full share of the interest attaching to the growth of the noble stream of English history. If we have Arthur and Alfred at the beginning, we may look, in comparatively modern times, to Raleigh on the border at Sherborne, and to Wellington, who honoured us by taking the deserved title of his victories from a small town in our county. What nobler field can the archæologist have than to examine the features and collect the traditions of a county where great events have passed and great men have lived? Each village almost has traditions and remains connected with the early history of our county. Let us hope that the roll of Somersetshire worthies is not closed, but that the rising generation, when they study our past history, may emulate their forefathers, and remember that, with education brought to every man's door, we are more and more approaching the ideal of the political economist, when every man may start on equal terms in the race of life.

BRADFORD SCHOOL-BOARD SCHOOLS.

A LIST of fifty-seven efficient public elementary schools in the borough has been prepared, and of these sixteen are Board schools. Five new School Board schools have been opened, and the compulsory bye-laws put in force at the same time. There are now eight School Board schools completed, at a cost of about 116,000*l*.

The Ryan-street schools have been built from the designs of Messrs. Jackson & Longley, architects, and are situated in a populous district off Manchester-road, where the town is extensively spreading. Standing on a hill-side, with a frontage of 300 ft., broken in the centre with a projecting gable and tower, 75 ft. in height, flanked on either extremity with two projecting wings, with bay windows, they have an imposing appearance. The boys' school, at the east end, is 66 ft. by 20 ft., with a wing in the rear 29 ft. by 20 ft., and 16 ft. 6 in. in height to the wall-plate; two class-rooms open from it, one 21 ft. by 18 ft., and the other 20 ft. square; the cloak-room is 18 ft. by 15 ft., and the lavatory 18 ft. by 11 ft. The infants' school is in the rear of the centre, measures 61 ft. by 30 ft., has a height of 27 ft. to the collar-beam, and a gallery is placed at either end; the class-rooms are respectively 22 ft. by 20 ft., and 18 ft. by 20 ft.,

the cloak-room, 17 ft. by 20 ft.; and the lavatory 11 ft. square. The girls' school, at the west end, is 80 ft. by 20 ft., and the wing in the rear 20 ft. square, of the same height as the boys' school; one class-room is 20 ft. square, and the other 21 ft. by 18 ft., while the lavatories and cloak-rooms are of similar size to the boys'. Separate entrances are provided for all the departments, and all have distinct playgrounds, asphalted. The rooms have open-timbered roofs. The schools are surrounded with dwarf walls and palisading. Mr. Squire Holdsworth, builder, of Wike, took the whole contract and sub-let it to other people. Mr. Alfred Thornton is clerk of the works. The capacity of the schools is for 800 scholars. The site, 9,680 yards in extent, cost 2,800*l.*; the expenditure on the building is 14,729*l.*, and adding architect's commission brings the total cost up to 18,029*l.*, or at the rate of 22*l.* 10*s.* 8*d.* per head per scholar, but the workable capacity of the school is greater than 800 scholars.

The site for the Barkerend schools, erected from the designs of Messrs. Andrews & Pepper, architects, is near Barkerend-road, on the east side of the borough, fronting to Undercliffe-street. The style is French Gothic, simply treated, but a tower in the original design was cut out to decrease the cost. The shape is the same as most of the other schools, the infants' school in the centre projecting to the rear, and the boys' and girls' schools in the wings. The main front is 240 ft. long, and the infants' school 92 ft. deep. The boys' school is 52 ft. by 20 ft., and 19 ft. in height to where the roof begins to rise from the wall. The girls' school is of similar size, and the school-rooms have two class-rooms each, one 20 ft. by 18 ft., and the other 18 ft. by 16 ft. The infants' school-room is 40 ft. by 30 ft., entered from the playground, and has two class-rooms, each 22 ft. by 18 ft. The infants' school-room and some of the class-rooms are fitted up with galleries, and the buildings cover an area of 1,100 yards. Accommodation is found for 500 children. The site, 8,353 yards in extent, cost 3,460*l.*; the outlay on the building is 10,966*l.*, and with the addition of commission makes the total expenditure 14,976*l.*, or at the rate of 29*l.* 19*s.* per head per scholar. Mr. S. Holdsworth is the contractor.

Dudley-hill Schools are situated on the hill-top, near the extremity of the borough, at Bowling. They have been built from the designs of Messrs. Knowles & Wilcock, architects. The T-shaped style has been chosen, the boys at one end, the girls at the other, and the infants in the rear. The façade is broken by four gables, filled with tracery windows, one gable at either end and two in the centre, a bell-tower rising to a height of 90 ft. over the boys' entrance, topped with a vane. The boys' school at the east end, 50 ft. by 20 ft., has two class-rooms, one 18 ft. by 17 ft., and the other 18 ft. by 17 ft., with cloak-room 17 ft. 10 in. by 18 ft., and lavatory 17 ft. 10 in. by 12 ft. The girls' school is of the same size, with two class-rooms, cloak-room, 16 ft. by 18 ft., and lavatory. Both school-rooms are 25 ft. 6 in. in height. The infants' school, with entrance from the playground, is 44 ft. 6 in. long by 30 ft. wide, and 29 ft. 6 in. in height, fitted with a gallery and two class-rooms, one 30 ft. by 20 ft., and the other 20 ft. by 15 ft., with lavatory and cloak-room. The roofs are hammer-headed. Mr. Levi Moulson is clerk of the works. The schools front to Lorne and Argyle streets. The buildings, which will accommodate 480 scholars, have been erected for 9,520*l.*, or a total expenditure, inclusive of commission, of 12,300*l.*, or at the rate of 25*l.* 12*s.* 6*d.* per head per scholar. Messrs. Milner & Rudd were the masons, and Mr. S. Jackson, joiner.

Horton Bank Top School, built from the plans of Mr. E. Simpson, architect, is exclusively for infants, and is the smallest of the Board schools. It stands high up on the hill-side at Horton Bank Top, and the infants will have the benefit of exposure to the full fury of the northern blasts. The site, 7,497 yards in extent, although bought cheap for 700*l.* has proved a dear bargain, and has caused the schools to cost far more than was intended. First, there was a hill to remove, then an old quarry was discovered, and almost as much stone had to be buried before such a foundation could be got as would suffice to build an ordinary school. It was proposed to build a school for 600 children, boys, girls, and infants, but it was eventually decided to proceed only with the infant department, for 200 scholars. The entire scheme would have formed a handsome school with a tower. The completed school is 57 ft. long by 30 ft. wide, and 36 ft. in height to the collar beam, with a class-room opening from it, 18 ft. square, and a babies' room, 37 ft. by 20 ft. There is also a cloak-room and a lavatory. The playground in the rear is asphalted. Messrs. B. Illingworth & Son, builders, Bradford, were the builders. The gas-fittings have been supplied by Mr. Thomason, of Birmingham. Owing to the special causes, the cost of this school has been comparatively greater than any of the others, although there is hardly any ornamental work about it. The site, 7,496 yards, cost 700*l.*; there has been expended on the building, 5,158*l.*, and adding commission, makes a total of 6,208*l.*, or at the rate of 31*l.* 0*s.* 9*d.* per head per scholar.

All these schools are built of stone externally, and internally the woodwork is of selected pitch pine, the door jambs, window dressings, and other work of cleansed ashlar. The windows facing the south are filled in with ground glass to mitigate the force of the sun's rays; ventilation is effected by Burt & Potts' iron window-frames, to open at pleasure, and ventilators in the roof. Warming is by Gibbs's adaptation of Perkins's hot-water apparatus, as well as by open fire-grates in all the rooms. The conveniences are Macfarlane's patent. The fittings are of pitch pine, and the playgrounds, large and roomy, are covered with asphalte. The cost appended to each school includes everything, fittings, as well as land and buildings. The total cost of the eight schools will be 116,429*l.*, and estimating the aggregate capacity at 4,480 scholars, the aggregate cost per head per scholar is about 25*l.* 19*s.* 9*d.* The following table gives in a compact form a few particulars respecting the Board's eight schools:—

Name of School.	No. of Scholars.	Site. No. of Yds.	Cost of Land.	Cost of Building.
Barkerend	500	8,353	£3,460	£10,966
Bowling Back-lane	500	7,800	2,250	10,974
Dudley-hill	480	8,000	2,300	9,520
Feversham-st.	800	7,851	8,750	14,550
Horton Bank	200	7,496	700	5,158
Lily Croft	600	10,365	3,350	11,340
Ryan-street	800	9,680	2,800	14,729
Whetley-lane	600	11,000	3,600	8,200
Totals	4,480	70,545	£33,510	£85,437

Name of School.	Architects' Com.	Total Cost.	Per head per Scholar.
Barkerend	£550	£14,976	£29 19 0
Bowling Back-lane	435	13,659	27 6 4
Dudley-hill	480	12,300	25 12 6
Feversham-street	532	23,882	29 15 9
Horton Bank	350	6,208	31 0 9
Lily Croft	440	15,050	25 5 0
Ryan-street	500	18,029	22 10 8
Whetley-lane	475	12,275	20 9 2
Totals	£3,782	£116,429	

THE ILIAD AND METALS OF HOMER: THE DISCOVERIES IN THE TROAD.

AFTER Dr. Schliemann had left the Troad, a pot filled with gold was found by two workmen, who rightly concluded from its weight that it contained valuables. Might not this pot have been buried by its owner, as is done in Palestine nowadays, on account of wars, invasions, robberies, &c., carried on in that lawless land? We may also infer from the valuables contained in this pot, and from the vases, &c., that gold was not scarce in that ancient city. Homer represents gold to have been abundant also among his heroes. We read that Agamemnon was about to sacrifice his daughter at Aulis when Diana snatched her away and left a *hind* in her stead. With this we may compare Abraham's offering up of Isaac in Gen. xxii., when a *goat* was sacrificed in his stead. Idomeus, on the point of being shipwrecked, vowed, that if preserved he would sacrifice whatever he met with when he landed; he was preserved, and having landed, met his son, and would have carried out his vow had not his subjects expelled him. Compare with this Judges xi.

Mortars and pestles have been found in numbers in the Troad. The Arabs use such mortars and pestles to "bray" wheat for making a kind of bread called *kibby*. They also pound fish and flesh in them; from the flesh they make *leben immhâ*—"kid in its mother's milk." Might not these Troadic mortars and pestles have been applied to the same use?

Bracelets, ear-rings, head-dresses, &c., have also been found. Gideon defeated the Midianites, "and said unto them (*i.e.*, the Israelites) I would desire a request of you, that ye would give me, every man, the *ear-rings* of his prey;" for they (the Midianites) had golden ear-rings, because they were Ismaelites, *i.e.*, Arabs. And the weight of the golden ear-rings that he requested was 1,700 shekels of gold (about 3,300*l.*), besides *ornaments*, and *collars*, and purple raiment. Nor were ornaments confined to wandering Arabs, for every nation of the East possessed them.

There cannot be the least doubt that a city existed there, and was burned; but that it was besieged, taken in the manner described, and burned by Greeks, is a matter extremely dubious, if not altogether improbable.

The kingdom of Lydia bordered on Mysia, in which Troy was situated; but might not these two have been joined in one under the Mæonians, whom the Lydians expelled?

Homer was born in or beside Lydia, and that iron was unknown in Lydia, even at a later date, is proved by the celebrated conversation between Crœsus and Solon, the Athenian (B.C. 560–546). These Mæonians were, it is supposed, Pelasgians, and "it is more than probable that the Trojan Æneas and his followers were likewise Pelasgians"; indeed, a Lydian origin has been assigned to some of the discoveries.

Homer is called the Mæonian bard by Horace:

> "Scriberis Vario fortis, et hostium
> Victor, *Mæonii* carminis alite."—Carm. i. 6. 2.
>
> "Non, si priores *Mæonius* tenet
> Sedes *Homerus*."—Carm. iv. 9. 5.

There cannot be the least doubt that this so-called Troy had an Asiatic origin; that the people inhabiting it and the Greeks were sprung from two different stocks; and, if such is the case, why should the king and generals of an Asiatic city have Grecian names? We may fairly suppose that traditions of the invasion of Lydia by the Lydians were current in Homer's time; and, since Homer was a minstrel of the people, and his object was to please his countrymen, he may have woven (and probably did weave) other legends into these, and thus formed a great national poem. Perhaps Troy itself was the chief stronghold of the Mæonians.

As regards metals. If σίδηρος (iron) was used for domestic, agricultural, and household purposes (?) in other countries, it was not so used in Homer's birthplace; for Crœsus, having been asked by Solon if there was any iron in Lydia, replied in the negative. Now, if the Greeks possessed iron in such abundance we may infer that the Trojans also possessed it; for, as appears from the Iliad itself, the Trojans were as civilised as their opponents. But we have no evidence that the inhabitants of the city which Dr. Schliemann has disinterred were acquainted with iron at all.

There is good reason to believe that Homer was acquainted with *bronze*. The bronze materials in the British Isles are supposed to have been introduced by the Phœnicians; if so, Homer was also acquainted with bronze, for the Phœnicians traded with Smyrna and other parts in Asia Minor and Greece. Long, bronze leaf-shaped swords have been found in Greece, corresponding to those mentioned by Homer.

Πάρις may perhaps be derived from πῦρ, "a fire"; he occasioned the *burning* of Troy, and his mother dreamed that a *blazing* torch was about to be born. Helen (Ἑλένη) from εἷλον (root ἑλ) aor. 2 of *αἱρέω*, "I seize," *i.e.*, "she who was carried off." She was wife of Menelaus, and was carried off by Paris.

Hecuba (Ἑκάβη) from ἐκβάς, aor. 2nd part. of ἐκβαίνω, "to go out of proper bounds," *i.e.*, "she that went out of her wits," and consequently out of her form—she was changed into a dog.

I believe that a Grecian army was never arrayed against the city, whose ruins have now been discovered; but that it was probably the stronghold of the Mæonians, and was taken by the Lydians, and that on the invasion of the Lydians the Iliad of Homer is founded, mixed up with other traditions. T. A. M.

New County Buildings for Shetland.—The erection of the new county buildings, comprising Sheriff Court-room, Sheriff Clerk and Procurator Fiscal's offices, have been commenced at Lerwick. Mr. Rhind, of Edinburgh, is the architect. A new county jail is also to be built in the vicinity of the County Buildings, the site of both being on an elevated piece of ground at the north hillhead of the town. The contract for the Court-room has been taken by an Edinburgh firm for 3,600*l.*, of which sum the Treasury pay one-half. The contract for the new prison has been taken by a local firm, the amount being about 4,000*l.* Both buildings are to be proceeded with at once.

MARGATE DRAINAGE COMPETITION.

AT the last meeting of the Margate Council, a report from Sir Joseph Bazalgette was read, in the course of which the writer said, none of the competitors had complied literally with all the requirements and conditions of the competition. Letters from several of the competitors were also read.

Mr. Bailey Denton, the author of "Intermittent Filtration," wrote to the council and pointed out that it was supposed when the competitors consented to send in plans for the drainage that those selected were invited on account of their known experience and connexion with the best drainage schemes, and had he known that Sir Joseph Bazalgette was going to be called in to advise the council, he should have objected to compete, well knowing the opposition Sir Joseph had to his views. He protested against the appointment of a judge who was necessarily prejudiced.

The Borough Surveyor, Mr. Albert Latham, sent in a written application to the Council for permission to lay before them a plan embodying the tunnel idea of "Economy," and the suggestions of Sir Joseph Bazalgette; and thus get a combined plan, which, in his opinion, would carry out the drainage of the borough to a successful termination. He was anxious that what was done should be done to the advantage of the borough, and he should consider the services now offered would fall within the office held by him.

The Council came to a resolution to examine the plans themselves with reference to some of the objections raised by the referee; and it was resolved that Mr. Latham's letter should be dealt with as soon as the premiums were awarded.

HASTINGS TOWN HALL COMPETITION.

SIR,—When a body of practical men, deliberately and in cool blood, set any number of men to work to furnish them with designs for a building comprising certain specified requirements, for an outlay of 10,000*l.*, which sum being considerably less than half the probable cost (for it is clearly manifest that the accommodation required by their conditions will, at the rate of 8*d.* per cubic foot, amount to 24,000*l.*; the aforesaid sum of 10,000*l.* will provide for the modest outlay of 3½*d.* per cubic foot), it is to be sincerely hoped that the decision of this competition will not rest with those who drew up the conditions, and that such kind invitations will be declined (of course, with thanks) by many others besides W. P.

THE FLORICULTURE OF KENNINGTON PARK.

THE inhabitants of Lambeth, as represented by the local vestry, have at present a grievance in what they complain of as the imperfect and unsatisfactory planting and arrangement of the flowers in Kennington Park; and a deputation from the vestry has just had an interview on the subject with Lord Henry Gordon Lennox, the Chief Commissioner of Works. The grievance put before the Chief Commissioner was that the annual sum of 1,800*l.*, voted by Parliament to the park, has been gradually reduced, and that during the present year it is only 1,370*l.* They complain that this reduction has been made in the face of an increase in the total sum devoted to the parks, and they are desirous of knowing why the southern portion of the metropolis should have had the money devoted to it reduced in this way by the Government, whilst for the northern portion there had been an increase. But their main complaint was that the planting of the park with flowers, which was formerly carried out by Mr. Rogers, on behalf of the Government, was now effected upon the contract system, the result of which was that new floricultural productions were excluded from the park, that the plants were of an inferior character to those which were generally found in the Royal parks, that the planting was not done in the proper season, and that the general appearance of the park during the summer season was now in a very unsatisfactory state. They urged upon the Chief Commissioner the desirability of reverting to the former system, and to do away with the present unsatisfactory contract under which the park was suffering. Battersea Park was cited as a striking instance of the superiority of the system there adopted, where the planting was done by the Government.

Lord Henry Lennox, in his reply to the deputation, observed that, as it appeared to him the deputation wished him to break the existing contract, they had asked him really to reverse the policy of his predecessor, and instead of the floriculture of Kennington Park being continued by contract, the Government should reassume it into their own hands. The matter would require his serious consideration. The whole tendency of the past few years had been to take the management of the parks out of the hands of Government, and place them under the control of the Metropolitan Board. He promised the deputation that the whole matter should receive his careful attention, and he would give his reply as soon as possible after his return from the holidays.

It may be added, that the great falling off in the floriculture of Kennington Park during the last two or three years has been a subject of general remark. Those who have been in the habit of passing through the park cannot fail to have noticed this fact.

AN AWKWARD SLIP.

A LANDSLIP, of a very alarming and serious description, is taking place at Hagesgate, in the Cleveland district, and indicates what honeycombing the earth by mines is likely to end in.

The slip in question has completely blocked up the turnpike road for nearly half a mile, and already a lawsuit, between Lords Faversham and De L'Isle and tenants, is set down for hearing at the next York Assizes, arising out of the matter.

An attempt has been made to remove the obstruction, which is composed principally of hard clay, but it proved a complete failure, owing to the great elevation and steep incline whence the slip proceeded, and the consequent danger of causing a yet more dangerous precipitation of matter, which would imperil several farmhouses and large buildings in the locality. As it is, fears are entertained that the mischief will be considerably increased during the winter months. The mountain is owned by Lord Faversham, and its sliding down has invaded the estate of Lord De L'Isle, and the ratepayers of the township, who are tenants of Lord De L'Isle, are the parties chiefly aggrieved. They consider that Lord Faversham should take back his own estate, which is at once "real," and, as it appears, "movable," because the slip has been caused by permitting excavations by miners in search of jet.

The whole of the mountain on the west side has also been similarly undermined, and the farmers and others are in daily fear of being buried alive. Travellers have to make a *détour* of two miles through the obstruction.

SEWAGE IRRIGATION AT LEAMINGTON.

WE have received a letter from Mr. T. Mellard Reade, C.E., in which he says:—

A few weeks ago I had the pleasure of inspecting the results achieved on Lord Warwick's farm at Leamington. The population is 24,000, but of these 15,000 only are connected with the water service. The sewage is pumped up from the outfall by two 60-horse engines through from two to three miles of 18 in. cast-iron pipes, the total lift being 130 ft. This part of the scheme has been engineered and paid for by the town, which delivers at its own cost the whole of its sewage on to Lord Warwick's farm, he paying a rental of 400*l.* per annum for it, and on his part covenanting to purify the whole of it for thirty years. The farm consists of about 400 acres of gently sloping ground, the subsoil being mostly gravelly drift, lying on the Keuper sandstone and marls. It is laid out on the catch-water system, excepting where very flat, in which case the ridge and furrow is adopted. The main carriers are of fire-clay pipes, and, excepting for the occasional manholes and outlets, the sewage is unobservable. One of the advantages claimed by Mr. Clifford for pipes as against troughs, such as are used on Mr. Hope's farm at Romford, is that the sewage can be carried over slacks without any unsightly banking up or trestles being required, as he finds practically that 18-inch pipes with cement joints will stand a 6-ft. head of water. I can speak positively as to the extreme simplicity and success of the method of distribution adopted.

About fifty acres are laid down in rye grass, which is grown and frequently sewaged for two years, and is then broken up and replaced by other crops. This is really the safety-valve of the farm, as grass is the only crop that will stand constant sewaging. There are, also, about forty acres of pasture, great care being taken in sewaging it, to avoid injuring the character of the grasses; 310 acres are devoted to tillage; and the splendid crops of wheat, barley, oats, mangolds, cabbage, potatoes, &c., bear witness to the efficacy of the system. . . . . The total growth of rye-grass per annum is nine cuttings, yielding about from fifty to sixty tons to the acre. The mangolds Mr. Tuff estimates will be from forty to fifty tons to the acre.

These are some of the facts elicited during my inspection. The sewage of Leamington is effectually disposed of and thoroughly clarified, and it appears to me that filtration through the ground, urged by the Committee of the British Association on the Treatment and Utilisation of Sewage, as so necessary, can be as effectually done in a much simpler manner and more economically by the catchwater system than by the ridge and furrow system considered essential by them. We also learn this: that sewage can be effectually disposed of and clarified by land, but that the profit is only incidental to favourable conditions.

IMPROVEMENT OF DECORATIVE ART.

MR. GEORGE DOBIE, of George-street, Edinburgh, has renewed his offer of a number of prizes for the best designs in drawing-room and dining-room decoration, and also for designs in church interior decoration in perspective. The competition is open to journeymen house-painters and decorators, British and foreign. A similar competition took place about seven years ago. It was so successful, that Mr. Dobie has felt stimulated to renew his offer. A new feature introduced on this occasion is a competition in designs for church interior decoration, — a branch of art which has of late been largely developed. The designs must be lodged by the 1st of February next year, and their respective merits will be decided by a committee of qualified artists. The working classes, we understand, will again be allowed an opportunity of inspecting the various designs,—a privilege of which a large number of operatives gladly availed themselves on the occasion of the last competition.

DUNDEE PICTURE GALLERY AND MUSEUM.

THE Dundee Free Library Committee are just now showing a very attractive exhibition of pictures in their Free Gallery and Museum. The collection is representative of various styles and schools of painting. In portraiture we have five works from the easels of Lely, Reynolds, Northcote, Romney, and Grant, lent by Lord Kinnaird. There are three works attributed to Wilson in the department of landscape. The first, "The Good Samaritan," was presented to the gallery by Rev. C. C. Maxwell; the second, "Solitude," an engraved work, has been lent by Mr. A. D. Grimond; and the third, "Cicero's Villa," is also the property of Mr. Maxwell. These works are justly attributed to this great master of landscape, inasmuch as they are characterised by internal evidence of their genuineness. Showing the defects of composition which marked Wilson's productions, they have also his great originality and that natural colour which blinds the critic to his defects. Mr. Maxwell also lends some excellent copies of Italian and Spanish pictures, and a work by Teniers, "The Alchemist." Numerous specimens of the Dutch and Flemish school are contributed by Mr. Michael Ferrier, whilst several excellent examples of a rising local landscape artist, Mr. Allan Ramsay, are sent by various *connoisseurs*. The museum is also constantly receiving additions, and is well worthy a visit.

LINCOLN'S INN FIELDS TO THE STRAND.

A "WORKING MAN" writes,—"Living not far from King's College Hospital, I have often thought how much better it would be if there was a road to it through Houghton-street. I think the front of the hospital is in a line with Houghton-street. Some five or six years since two houses in Clement's-lane fell down; if the other two, facing Houghton-street, had fallen with them, there would have been a fine opening to the hospital. I think it is a great pity they did not fall. I was passing by last evening, when I saw workmen putting hoarding round these two houses in Houghton-street. I thought, 'Now they are going to make the straight road to the hospital,' but was informed they were going to build a school. I thought it was a

great pity, because it is almost a straight road from the Strand, and it would save people from dodging round that beautiful colonnade in Clare-market. Instead of building a noble institution, like King's College Hospital in, it ought to be brought out more prominently, so that it could be seen, and then some of those gentlemen who leave legacies to different institutions would not forget King's College Hospital; for I am sorry to say they do forget that hospital more than any other in London."

The whole nest of streets and passages behind the south side of Lincoln's-inn-fields requires re-arrangement and improvement. There is a legend hereabout that years ago a young man from the country bearing a black bag started one winter night from Portugal-street to get into the Strand, and that he has been wandering round and about ever since, constantly returning with a disconsolate aspect to his original starting-point. On foggy nights his form may be descried in Clare Market. Anyhow no one has yet heard that he ever reached the Strand.

HOSPITAL CONSTRUCTION.

M. POLLET, civil engineer, has excited considerable sensation in military circles by a project recently read at the Académie des Sciences on "Incombustible Barracks and Hospitals." The application of the new army law, the augmentation of artillery regiments necessitating a provision for about 200,000 men, render M. Pollet's system a question of the day. In a small scale at Paris, in a larger one at Bourges, it has already been carried out with complete success. M. Larrey, member of the Institute, in presenting the inventor's *mémoire*, said that most of the barracks and *casernements* actually existing were buildings of elevated construction with several stories superposed. Their massive walls, their receding angles, form heaps of porous substances which favour the accumulation of dust, the development of miasma, and the breeding of vermin. M. Pollet demands, *imprimis*, the withdrawal of military stations from populous centres. Having a vast space before him, he suppresses the superposition of stories. He then seeks conditions of salubrity, solidity, and economy in the form of his construction, and in the selection of incombustible materials, strong and light, offering hard and elastic surfaces and not apt to split or rot. Having compared different interior vaults, M. Pollet decided upon adopting the ogive. The construction of his incombustible barracks is, therefore, characterised by an iron ogival framework, springing from brick foundations, and united by rafters of iron; the interstices between the ribs are filled with solid or tubular bricks. The flooring is either paved, asphalte, or laid on a foundation of metal shavings. These constructive principles are also applicable to the building of cavalry stables. M. Larrey warmly recommends M. Pollet's system. He alleges that it is chiefly applicable to military hospitals; and he observes, moreover, that the majority of young soldiers are peasants, accustomed to a one-storied house, reared in the salubrious conditions such a building affords, and they must sicken or perish in the five-storied barracks actually existent.

A FLÈCHE FOR WESTMINSTER ABBEY.

SIR,—With reference to Mr. Wethered's late most interesting letter to the *Times*, one could not but be forcibly reminded, whilst reading that portion bearing immediately on Notre Dame, Paris, of the great want which all must experience, when viewing the exterior of the Abbey, of a *something*, whether tower or flèche, to crown the crossing of the church.

It has, however, always seemed to me a matter for hearty congratulation that Sir Christopher Wren was never permitted to erect the tower and spire for which he had prepared plans and drawings; not that the design in itself was objectionable, but that a central tower, with or without a spire, would appear to be out of all character with the rest of the church. The slenderness of the four great columns that must have borne the weight, the unusual narrowness of the great aisle in proportion to its height, and the extremely eastern position of the transepts—all point to the undesirability of carrying out such a design as that once contemplated by the great architect of St. Paul's.

But, if these peculiar features of the Abbey be so many valid objections to the erection of a central tower, do they not all tend to prove that it was the original intention of Henry III.'s architect to have placed a flèche at the intersection of the transepts; and is not this conjecture strengthened by the fact that corbels still exist between the springings of the arches, under the lantern, evidently intended to carry the ribs of a groined roof; also, that old prints of the Abbey show no lantern, but the lofty external roofs of lead, of nave chancel and transepts, meeting at a point which would be that now occupied by the central boss of the lantern? It must not be forgotten, too, that the Abbey is built after a French model.

Of one thing, at all events, there can scarcely be a doubt, viz., that the present lantern was never originally contemplated. Mean and contemptible, it is out of all character with the general splendour of the Abbey. May I suggest, then, that to have Sir G. Gilbert Scott's opinion as to the desirability and feasibility of substituting a flèche for the lantern would be most interesting? In conclusion, let me add that, constructed of wood covered with lead, and carried up no greater height than the general proportions of the Abbey would demand, a flèche need *not* tax, to a greater degree than does the present lantern, the strength of the four supporting columns beneath.

F.

THE WHITBY JET EXHIBITION.

UNDER the auspices of the Whitby Institute of Popular Literature, Science, and Arts, an exhibition of manufactured jet was recently opened in St. Hilda's Hall, Whitby. The Whitby Institute has long had an art-class in operation, for teaching young jet-workers the true principles of taste and design, and under the tuition of Mr. T. H. Readman it has done much good. The first jet exhibition was held in Whitby in 1858, when liberal prizes were awarded, and so pecuniarily profitable was that effort that the nucleus of a building fund was then formed. Again, in 1863, the jet exhibition was revived, chiefly through the instrumentality of the late Sir H. S. Thompson, who was then M.P. for the borough, and who perceived the national magnitude and growing importance of the trade. After this the movement was arrested, but now the exhibition is successfully revived again. Sir George Elliot, bart., M.P., subscribed 60*l.*—or 20*l.* a year for three years—to promote honourable rivalry and superior excellence among the workmen in jet, and to adapt the manufacture more effectually to modern tastes and requirements. The Society of Arts, London; Mr. C. M. Palmer, M.P.; Mr. Milbank, M.P.; and many of the local nobility and gentry, have afforded substantial aid, and the leading master jet-ornament manufacturers have also supported the undertaking with spirit. The result is that the committee have been able to offer 120*l.* in prizes, in forty classes, and the total number of entries exceeds 250. Some of the articles sent in to compete were sold before the prizes were awarded for as much as 60*l.* or 70*l.* each. Others are remarkable in design and execution. Many of the specimens were classic in treatment. The exhibition was formally opened by Mr. George Taylor, of Clapham Park, Surrey, who heartily congratulated the promoters on the success of the exhibition. Professor Tennant, of London, was the judge of the specimens, that gentleman having also been one of the judges for the Turners' Company, when the freedom of that ancient City guild was bestowed on a Whitby jet-worker for the best carved work. There was a very large and fashionable attendance, and the exhibition remained open on the following day.

FIRES.

At Glasgow Prison.—A fire recently broke out in the Glasgow South Prison, Jail-square. The flames were not extinguished till the roofs of the kitchen and the cooking-rooms were burned down, and considerable damage was done to clothing and other property. It is supposed that the fire was the result of the overheating of a flue. The damage to the building and property is considerable.

Great Fire at Nottingham.—100,000*l.* damage has been done, and 1,000 men thrown out of employment, by a fire on the premises of Mr. Samuel Morley, M.P., in Manvers-street, Nottingham. One of the largest employers in the hosiery trade is the member for Bristol. In the factory was a great deal of patent machinery of great value, besides considerable stock. On the 21st ult. the workpeople left as usual, and at half-past two o'clock a.m. the centre of the great building was a blaze. The inhabitants of the locality insist that they might have subdued the flames at the outset had there been plenty of water in the factory cistern, but unfortunately there was not. All the fire-engines in the town were brought into requisition, but when the fire had taken fairly hold the efforts of the firemen were futile. The work of destruction went on for several hours, carrying all before it,—first one part of the factory and then another falling, until the whole was demolished. At least a thousand people will be thrown out of employment by the disaster. The owner is well insured. The origin of the fire is not known, but a strict inquiry is to be made.

Fire at Jarrow.—A fire which has proved very destructive broke out in the extensive paper-mills belonging to Messrs. William, Henry, & A. Richardson, situated at Springwell, near Jarrow-on-Tyne. The fire was first discovered in the laboratory, and rapidly spread to the finishing-room, containing 4,000*l.* worth of paper ready for customers. Thence it passed to the esparto-grass shed, and continued to burn with alarming force, and was not extinguished until the large and valuable mills, with their entire stock of paper and material, were completely destroyed, the walls alone being left standing. The machinery in the mills is also greatly damaged, and the loss will amount to between 30,000*l.* and 40,000*l.* Through the casualty about 250 men and women will be thrown out of employment. The premises and stock are insured. The cause of the fire is at present unknown.

SANITARY AND EDUCATIONAL EXHIBITION, GLASGOW.

WE desire again to remind some of our readers of the Exhibition in connexion with the Social Science Congress that will be held in Glasgow, from the 30th of September to the 10th of October, 1874. It will be the third exhibition of sanitary, educational, and domestic appliances in connexion with the Association for the Promotion of Social Science, and will take place in the Drill-hall, Burnbank, Glasgow. The managing committee look forward to a very large and valuable display of scientific and useful appliances coming within the range of their operations. The objects included will come under the heads:—

1. Warming, Ventilating, and Lighting.
2. Domestic Appliances and Economic Apparatus.
3. Sanitary Architecture and Appliances, for outward and interior ornamentation.
4. Sanitary Engineering and Disinfectants.
5. Food and Clothing, Specimens of Food and Confectionary of all descriptions; and,
6. School Furniture and Educational Apparatus.

Mr. James Robinson, at No. 1, Adam-street, Adelphi, secretary to the managing committee, will give any information that may be desired.

SCHOOL BOARD SCHOOLS.

Long Buckby.—The new Board Schools here have been opened. The building stands on an eminence. It is a simple Gothic structure, built of plain red bricks, without any attempt at avoidable ornamentation. The boys' school is on the ground-floor, the girls' on the upper floor, approached by a stone staircase. Each school consists of a large room, 52 ft. in length by 18 ft. in breadth, with additional class-rooms for higher classes. The large rooms are provided with patent folding desks that are available either for writing-desks, tables, or seats with backs. They are light, airy, and well ventilated, and have besides a wainscoting to the height of something like 5 ft. The entrance to the boys' school is by a porch to the left. The staircase, which is approached from the right end of the building, leads to the girls' school, and is surmounted by a bell-turret somewhere about 60 ft. in height. Each school has its separate play-ground and other conveniences. In front of the school building, and separated from the street by a narrow strip of garden, stands the master and mistress's house. Under the same roof is a board-room, with waiting-room attached. The infants' school is a short distance from the boys' and girls' school. It is not an entirely new building, though it has undergone considerable repairs and enlargement. It was originally built for a

school, but was afterwards used as a working men's club-room. With reference to the new schools, some difficulty was experienced in obtaining a solid foundation, in consequence of its probably having been the site of a sand-pit at some former period. In some cases they had to go down 13 ft. to make a good foundation, which caused considerable delay, as well as addition to the expense. The foundation is of concrete.

ST. JOHN'S CHURCH, HORSELYDOWN.

SIR,—As our name has appeared in your paper during the last two weeks in reference to the estimates for the above, will you allow us to offer an explanation?

We beg to say our tender was never withdrawn, but our amount being so much lower than others, led us to re-examine our quantities, which had been hastily prepared through pressure of business, and we found that we had made an error in a cast, which we immediately brought to the notice of the architects, who were satisfied with the explanation, and our amount being then considerably lower than any of the others, we were ordered to carry out the works. T. H. MANSFIELD & SON.

*** The architects have confirmed this statement, and here the matter may end. That there was an irregularity in the proceedings seems clear.

CASES UNDER METROPOLITAN BUILDING ACT.

WOODEN BUILDINGS.

AT Hammersmith, Mr. Wigmore, builder, of Fulham, appeared before Mr. Ingham to answer two summonses, at the instance of Mr. Moseley, district surveyor: one for erecting a building without notice, and the other requiring him to enclose it with incombustible materials.

Mr. Claydon, who defended, submitted that it was not a building within the meaning of the Act. It was a temporary erection without sides to it, and used as a covering for carts. It did not touch any building. There were other builders round about, who had similar erections. He called,—

Mr. Evan Evans, a builder, who said he had seen the structure, which was 7½ in. from the adjoining building. It was simply a roof, supported by uprights consisting of deals.

Mr. Ingham thought the defendant ought to go to the Metropolitan Board of Works for their sanction to it. He should certainly hold that it was a building. He fined the defendant 1s., and 2s. costs, for not giving notice, and adjourned the other summons to give him an opportunity to apply to the Metropolitan Board, who would sanction the structure if there was not any danger.

Mr. Serff, a builder, of Fulham, was also summoned with respect to a carpenter's shop in Star-lane.

The defendant said it was a temporary building.

Mr. Ingham said some of those things commenced with being temporary and ended with being permanent. He fined the defendant 1s., and 2s. costs, for not giving notice, and ordered him to pull the building down, or enclose it with incombustible materials within the space of one month.

THE NEW LAW ON BUILDING SOCIETIES.

THE Act passed in the late Session to consolidate and amend the laws relating to Building Societies will come into operation on the 2nd of November next. In contains forty-four sections and a schedule of forms to be used extending over the United Kingdom. The registrars of Friendly Societies are to be registrars of Building Societies. A terminating society means a society which by its rules is to terminate at a fixed date or when a result specified in the rules is attained; a permanent society, which has not a fixed date or a specified result. Any number of persons may establish a society, either terminating or permanent, to raise money by shares for the objects mentioned, and the liability of any member of a society under this Act in respect of any share upon which no advance has been made is to be limited to the amount actually paid or in arrear on such share, and in respect of any share upon which an advance has been made to be limited to the amount payable thereon under any mortgage or other security, or under the rules of the society. There are several sections as to the making, registration, and alteration of rules, and they are to be binding on all members and persons claiming on account of a member. Officers are to give security, and to account and invest the surplus funds: the property of a society is to vest without a conveyance. Provision is made for payment of sums not exceeding 50*l.* in case of intestacy. Punishment is provided for withholding books, &c., as also for obtaining money fraudulently. The statute points out the necessary proceedings for the termination or dissolution of a society. Societies may unite with others, or one society may transfer its engagements to another. Disputes may be determined by arbitration or by a Court, as also by the registrar. Buildings for the object of a society may be purchased or leased, and minors may be elected members. Annual accounts are to be made, and regulations to be made with power to the Secretary of State to make orders as to fees, &c. The forms to carry out the Act are concisely worded.

THE WALKER ART GALLERY, LIVERPOOL.

THE tenders for the Walker Art Gallery, of which we gave a view and plan recently, were opened on the 27th ult., by his worship the Mayor, Mr. Andrew Barclay Walker, and were as follows:—

Tomkinson & Sons	£20,145 0 0
Leslie	19,521 0 0
Jones & Sons	19,130 0 0
Urmson	19,627 0 0
Rome	19,000 0 0
Mullin	18,679 0 0
Wells & Sons	18,600 0 0
W. & F. Witter	18,590 0 0
Burroughs & Sons	18,586 0 0
Thornton	18,540 0 0
Holme & Nicol	18,284 0 0
Gabbutt	18,150 0 0
Haigh & Co.	17,849 0 0

Messrs. Haigh & Co.'s tender being the lowest has been accepted, and this amount, with some 3,000*l.* or 4,000*l.* for finishings and sculpture, will represent, it is stated, the entire cost of this building, which, we trust, will long hold up to honour the name of the liberal donor.

CHURCH-BUILDING NEWS.

Horsham, St. Faith.—The parish church of St. Faith, about five miles from Norwich, has been restored and reopened, at a cost of about 3,000*l.* It consists of a nave and north and south aisles, south porch, west tower, and chancel, which are all in the Perpendicular style of architecture. The arcade between the nave and north aisle had seven arches and piers, all formed in rough brickwork and plastered over. On the south side there were six similar arches, the porch occupying the place of the seventh. All these arches had gone over several inches from the upright. These have all been taken down, and arcades formed of moulded stone work, and the clearstories rebuilt. The old oak roof has been restored, and additional ties introduced in it, and covered with green slates instead of as formerly with thatch. The roofs of the side aisles have also been taken off and re-made as far as necessary and re-fixed and covered with lead as before. All the windows, doorways, and other stonework where defective have been made good as far as absolutely necessary. The whole of the windows have been glazed with cathedral glass with narrow coloured glass borders. The tower, which is upwards of 100 ft. high, has been put in good order, the parapet and pinnacles being rebuilt as they were. Two of the bells have been recast, and the whole peal of six re-hung. The recasting was done by Messrs. Warner & Son, of London, and the rehanging by Mr. Crane, of Horsham. The porch, which is a flint and stone erection, with a chamber over it, has been restored, and a staircase of open stonework made in the south aisle to reach the parvise, which is to be used as a vestry. The benching is of oak, with poppy-head ends, to match several old poppy-heads which remained in the church, and which are re-used. The flooring under the seats is of wood and the passages are paved with Minton's tiles. The old screen, which had been painted over in white, has had its panels freed from the modern coatings of paint, and the result has been the discovery of ten panels containing various saints. The pulpit, which is of the same date as the screen, the latter part of the fifteenth century, was also painted white; but Mr. Phipson was strongly of opinion that under this the original paintings remained, and upon the careful removal of this white paint, ten figures were discovered, namely, St. Christopher with the Infant Jesus, St. John the Evangelist, with cup and serpent, St. Andrew with cross and book, the Virgin Mary holding the Infant Jesus, with a monk below in the attitude of prayer, St. John the Baptist with the lamb and book and cross, St. Stephen holding stones in a napkin, a monk holding a crosier and book, probably St. Benedict, and another holding a crosier. The last is a female figure crowned, holding a saw in her left hand and a book in the right. They have been re-fixed just as they were discovered, without any retouching. The whole of the works have been executed by Mr. Robinson Cornish, builder, North Walsham, from the designs and under the superintendence of Mr. Phipson.

Newcastle-under-Lyne.—A report has been prepared by the Building Committee giving particulars with reference to the re-erection of St. Giles's Church. The foundation-stone was laid in September last. The lowest tender for the execution of the works was that of Mr. Horsman, of Wolverhampton, and was for 15,000*l.* Certain amendments were subsequently made in the plans, and it was decided to postpone other portions of the work. A contract was then entered into with Mr. Horsman for 10,159*l.* 12s. 6d., which amount exceeds the sum at present subscribed to the extent of 2,275*l.* 16s. 5d., while it provides for the superstructure only, and does not include the internal fittings, architect's commission, and other items. The additional amount of 5,527*l.* 18s. 5d. is therefore required for the entire completion of all the works, including the replacement of tablets, tombstones, and gravestones. The building is proceeding under the superintendence of Mr. Clarke, the clerk of the works. Only a comparatively small portion of the work necessary for the restoration of the tower is included in the present contract, and comprises the restoration of the Early English arch leading into the church and replacing the eastern side of the same as high as the apex of the nave roof. It is estimated that about 750*l.* will be required to further restore the tower.

Weymouth.—An interval of twelve months has elapsed since the Earl of Shaftesbury, the Lord-Lieutenant of the county, laid the central stone in the chancel window of Christ Church, and now the consecration and opening of the building for divine service have taken place. The erection of Christ Church has cost about 6,000*l.* The seats are one half free, and the edifice has been consecrated and opened free of debt or nearly so. There was great need in the town for additional church accommodation, those already in existence being too small to accommodate the visitors and residents during the summer months. Christ Church will supply this deficiency to a great extent, sittings being here provided for 800 persons. The tower is marred by the slate-roofed spire, which gives it a truncated appearance, although it is 124 ft. high. A stone spire, it is said, will be added at some future day. The architect is Mr. Ewan Christian, of London. The edifice is in the Decorated style. It is built of Portland stone in random courses, with dressings of Doulting stone. The interior is of red brick and pointed with black mortar, whilst courses of grey bricks run round the walls and arches. The main arches are supported by several Pennant stone pillars, with caps and bases of carved Portland stone. Two Devon marble pillars sustain the chancel-arch, the base of each displaying some carving. The chancel window, which is in King-street, is of the Early Decorated style, with the centre light reaching to the crown of the arch. This idea is carried out in the greater part of the windows. There is also a three-light window for the southern aisle. In Park-street are three more windows, whilst the nave is lighted by four clearstory windows. The church has a chancel, nave, and two aisles, vestibule, organ-chamber, and belfry. The width of the former is 33 ft. in the clear, and the aisles 17 ft. 6 in. The chancel is 33 ft. long, and the nave 39 ft. At some future time, as the necessities of the neighbourhood grow, and as money is forthcoming, the western wall will be pulled down, and accommodation be thus provided for something like 800 more persons. When such is the case the chancel will appear more in harmony with the nave. The whole of the chancel is laid with encaustic tiles, whilst the space within the Communion-rails is paved with the same material, but of a much more elaborate pattern. The church is conspicuous by its want of anything approaching adornment or decoration. At present the seats, which are of red pine, are neither stained nor varnished. At the rear of the church is a small building which will be used as an infant schoolroom, in order to satisfy the requirements of the Education Department, and thus prevent, as far as possible, the interference of a School Board in the parish. Mr. Thomas Dodson is the builder of the church. His contract was for 4,100*l.*, and this, together with the expense of the freehold, and the cost of laying a concrete foundation, and other items, makes the total erection of the church to amount to 6,800*l.* The new edifice is intended to have a peal of bells, and it is for this purpose the tower has been strengthened by some 3,600 piles, 8 ft. in length, being driven into a solid bed of concrete, 6 ft. in depth. Notwithstanding these

precautions, however, there was a slight settlement. The architect was consulted, and he gave it as his opinion that the stability of the tower was not in the least impaired by the operations connected with the drainage near the church. The money required for the bells still remains to be raised. Of the three churches in the town not one possesses more than a solitary bell. The new church is intended to be a chapel of ease to the mother church.

Bromsgrove.—The new church of All Saints, Bromsgrove, the foundation-stone of which was laid about twelve months since, has been consecrated and opened for public service by the Bishop of Worcester. The building is erected at the north end of the town, near the Workhouse. It may be stated to owe its origin to the late son-in-law of the vicar of Bromsgrove (the Rev. W. M. Molyneux), who, some time before his death, offered the sum of 500*l.* towards the object. The money was willed to the bishop under certain restrictions, and, added to a similar amount given by his lordship, formed the nucleus of a fund for completing the work. The church comprises nave with aisles, chancel with apsidal end, and organ-chamber on the north side, vestries for the clergy and choir on the south side, a baptistery formed at the north-west angle of the nave and aisles, in the lower portion of the tower, which rises at this part of the building, but which is as yet only partly erected, owing to limited funds. The principal entrance is at the west end, under a traceried west window. The style is Geometrical Gothic, after the type prevailing in the transitional period at the end of the thirteenth century. The detail is of simple character, and the architect appears to have studied effect in the work. The easternmost bay of the aisles on each side being projected and buttressed after the manner of transepts, breaks up the monotony of the roofing and elevation, and gives the edifice a cruciform appearance. The building is generally executed with the local sandstone, which has for centuries held a reputation as a sound building material, and of which the ancient parish church of St. John is built; but Box Bath stone is introduced in the tracing and portions of the moulded work throughout the building. Grey tinted stone is used for external walling, but a combination of light red and grey tinted stones is introduced in the moulded arches and piers of the nave and interior generally, which is lined throughout with yellow or buff-coloured pressed bricks, relieved by pattern brickwork, bandings, and crosses worked in red and light blue bricks, in the spandrels of the arches, &c. The roof is open-timbered. A lofty arch is thrown across the nave where the transepts occur. Open rose lights are also inserted in the clearstory wall, over the transept arches. The roof is covered with brindled Broseley plain tiles, with red ridge cresting. The windows are glazed with cathedral-tinted rough-rolled plate glass, in lead quarry lights. The chancel is paved with encaustic tiles, and the body of the church with blue and red quarry tiles, arranged in patterns. The building will accommodate 620 persons in the nave and choir. The building contract was completed by the autumn of 1873, since which time the church has awaited consecration. The contract was, after competition, undertaken by Mr. A. Estcourt (O. Estcourt & Co.), of Gloucester, whose tender was the lowest sent in, and who has executed the work, at a cost of 4,458*l.* 9*s.* 2*d.* Some portion of the carving had been executed by Mr. Roddis, of Birmingham, although the main portion remains to be done. The church will be heated by a hot-air apparatus, by Blake & Co. of Coventry. The architect, from whose designs and under whose direction the church and the various works connected with it were executed, is Mr. John Cotton, of Birmingham.

DISSENTING CHURCH-BUILDING NEWS.

Bolton.—The first of a series of opening services has taken place in the new Wesleyan Chapel. The whole cost, including the ground, is 2,300*l.*, which is more than was first estimated. The buildings are erected on a site given by the late Mr. James Rhodes, adjoining the highway and near the junction with the Idle-road. The basement, which, owing to the fall of the ground, is unusually light and airy, is devoted to school purposes, and the ground-floor forms the chapel, approached from Bolton-road by a flight of eight steps. The dimensions of the chapel internally are 67 ft. by 32 ft., and 27 ft. high to the ceiling. It is seated with open benches of pitch pine, and having low and sloping backs, and without doors. A gallery similarly seated is formed over the entrance-lobby, together affording accommodation for 340 persons. The windows are finished internally with plaster architraves and imposts mouldings, filled with ground glass pink borders. The whole of the joiner's work is of pitch pine. There is a minister's vestry with private entrance on the ground floor, and in the basement a large schoolroom with windows on three sides is provided, together with two vestries and a room for heating apparatus. Externally the building is of simple character, Italian in style. The walling generally is pitch-faced, and the open porch of the principal entrance is entirely of boasted ashlar. The work has been carried out, at a cost of about 2,200*l.*, by the following contractors:—Messrs. Kitchen & Rhodes, masons; James Naylor, joiner; Walsh & Son, plumbers; James Firth, plasterer; and — Thornton, slater. The architects are Messrs. T. H. & F. Healey, of Bradford.

Birtenshaw (*Bolton*).—The memorial stone of a new Wesleyan Chapel has been laid at Birtenshaw, Toppings, Turton. The site is on the north side of the road leading from Bramley Cross to Egerton. The chapel, which will be in the Gothic style, will be set back from the road about ten yards, and the ground rises from the road. The buildings, according to the plans, comprise a chapel, 57 ft. 6 in. long, and 35 ft. wide inside; and at the back, or north side, a minister's vestry, and choir vestry over the same, having externally the appearance of a chancel. The principal entrance will be at the front, opening into a vestibule, 7 ft. 6 in. wide, and extending in length the full width of the chapel, having folding doors therein, also stairs on each side (for boys and girls respectively) leading up to the scholars' gallery, which will be formed over the vestibule and project slightly into the chapel. The walls will be of brick above the stone foundations now already put in; the front and two side elevations will be faced with patent pressed bricks, and relieved with blue brick bands and string courses, also stone dressings. The front will be gabled. Internally the walls will be wainscoted 4 ft. high with match boarding, finished moulded capping, and above which the walls will be plastered. The height of the chapel internally will be 18 ft. to the square of side walls, and 26 ft. to the highest part of the ceiling. All the windows to the chapel will have margin squares, and be glazed with ground-glass. The margins to front windows and fan-light, also to north lights (placed on each side of orchestra) will have coloured glass. Arrangements for ventilation will be made. The chapel will comfortably seat 346 persons. The estimated cost of the building, so far as now contracted for, is 1,330*l.* This is exclusive of heating and lighting, erection of outbuildings, boundary walls, formation of grounds, &c., which, with other incidental expenses, will probably increase the cost to about 1,600*l.* The plans have been prepared by, and the works are being carried out under the superintendence of, Mr. Thomas Ormrod, architect, Bolton, and the contractor for the whole of the works now arranged for is Mr. William Townson, joiner and builder, of Bolton and Astley Bridge.

High Wycombe.—On Tuesday, the 21st ult., the foundation-stone of a new Primitive Methodist Chapel with schoolrooms, vestries, &c., at High Wycombe, Bucks, was laid by Lieut.-Col. the Hon. W. H. P. Carington, M.P. The new buildings will comprise a chapel with end and side galleries, to seat 500 adults; schoolrooms under; and in the rear three class-rooms, wash-house, stores, offices, &c. The main building is nearly 70 ft. from street to ridge. The style is thirteenth-century Gothic. The materials are of washed stock and red bricks, with stone. The fittings are in pitch pine. The total cost will be about 3,500*l.* including site. The heating apparatus is to be by Messrs. Haden & Son. The contractor is Mr. Ruben Spicer, of Wycombe; and the architect is Mr. Arthur Vernon.

Warrington.—The memorial stones of a new Wesleyan Chapel in Bewsey-road, Warrington, have been laid. The chapel, which is situated at the corner of Bewsey-road and Froghall-lane, is designed to present a good porch to both, outline and grouping of parts being depended upon rather than ornamental details. The style chosen is Early Gothic, and the bricks of the neighbourhood will be the principal material used, with courses of black bricks and bands and dressings of stone. The front to Bewsey-road is treated as the best. The large gable forming the end of the chapel will be the principal feature, and it is designed with an arcade of three arches on polished granite shafts and carved heads forming an open porch to the entrance; above this is a central group of windows under arched heads supported by stone shafts, which run down to the ground clustering with the granite columns, tied thereto by moulded stone bands, and connected therewith both by the carved capitals and moulded bases. Stone turrets rise on each side of the gable springing from the buttresses which stop each end of the arcade. The interior is arranged for about 470 persons on the ground floor and 370 in the galleries, which will run round three sides. The end opposite the entrance will have what may be called a chancel arch and apse; for although the space will be occupied by the organ and choir, this effect will be retained as much as possible. The fittings throughout are to be of pitch pine, varnished. Behind the chapel, but in direct communication therewith, will be four vestries, having entrance also from the side street, and a schoolroom which will seat 105 persons. The buildings have been designed and will be erected under the superintendence of Mr. C. O. Ellison, architect, Liverpool; and Messrs. Collin & Son, of Warrington, are the contractors for the whole. The estimated outlay, including cost of land, will be about 6,000*l.*

Haverfordwest.—The Tabernacle Chapel, which has for the last twelve months been undergoing extensive alteration and enlargement, is now re-opened for Divine worship. To a casual observer it would appear an entirely new building, and with the exception of the side-walls and the ceiling this is the case. On the plan the main part of the buildings is quadrilateral, with a projecting semicircular centre towards the front and rear. The main part of the building is 61 ft. 6 in. long, and 40 ft. wide, and divided longitudinally into nave and aisles. The front part comprises a central lobby, 14 ft. by 7 ft., and two staircase lobbies, wholly separated from each other, but entered from a semicircular portico, 18 ft. in diameter, over which is the organ-gallery. The rear part of the nave forms a projecting apse, 19 ft. in diameter, containing the pulpit platform; and to the left of this the vestry, entered from the body of the chapel. There are two side galleries and a deep end gallery approached from enclosed lobbies on either side of the building. The style of the building is Italian, freely treated; the exterior presents a façade comprising the semicircular centre and two receding wings divided into two stories or orders, the lower of which forms a rusticated stylobate, and the upper an entablature of Ionic order. The semicircular centre has three intercolumniations formed by two single and two coupled columns carried upon the surbase of the stylobate, and each intercolumniation has a square-headed window with moulded architraves, margins, and carved keystones and sill-trusses. A view of the interior shows a nave and aisles, formed by an arcading of five bays, divided by light cast-iron columns, with foliated capitals, carrying the galleries, and supporting moulded and enriched elliptic arches, with circular enriched medallions in the spandrels. The columns are connected by an ornamental cast-iron gallery-front, supported by a moulded cornice and frieze. The arcading supports a coffered and moulded ceiling, with enriched centrepieces, the ceiling over the nave being elliptic (the main portion of this ceiling is old). The ceiling of the apse is semi-domical, panelled and enriched, springing from a moulded cornice carried around, and above seven semicircular arch-headed windows, of tinted cathedral glass, with coloured borders and rosettes. The interior seats and fittings are of red fir, stained and varnished. The aisles are paved, with encaustic tile border, and the vestibules wholly with mosaic paving. Messrs. Allen, of Pembroke Dock, are the builders; Messrs. Macfarlane, of Glasgow, and Mr. Marychurch supplied the ornamental ironwork; Messrs. Messenger, of London, the gasfittings; Messrs. Maw, of Broseley, the encaustic tilework; and the architects are Messrs. Lawrence & Goodman, of Newport, Monmouthshire.

Chester.—The foundation-stone of a new Congregational Church has been laid in Upper Northgate-street. The structure is to cost 3,240*l.* Mr. T. M. Lockwood, of Chester, is the architect, and the contract for carrying out the work is undertaken by Mr. Thomas Richards, also of Chester. The building will be 72 ft. 6 in. long, and 38 ft. 6 in. wide, internally, having its main entrance from Northgate-street, through

two porches leading to the vestibule, 7 ft. in width. The height of the building will be 32 ft. 3 in. to the ceiling line inside, and about 48 ft. to the ridge. There will be a triangular space in the roof left for ventilation. The timber principals and other roof timbers are exposed below the ceiling line, and, like the other internal fittings, will be of pitch pine. Accommodation will be provided for 500 sittings, all upon the ground-floor. Externally, the front to Northgate-street consists of one gabled end, with large five-light lancet window, having broad mullions and detached shafts of red Mansfield stone, with carved caps and bases. On the north side of the gable is a square tower, which, at the height of 42 ft. from the ground, becomes octagonal in form. It is pierced by eight belfry lights, and terminates in a spire and vane, reaching the height of 100 ft. The front of the building, the tower, spire, and portions of the sides will be faced with Storeton Hill stone. The general style of the edifice will be Gothic of the thirteenth century.

Miscellanea.

A Short Life.—Within one month from the completion of the first house in Pithole city, Pennsylvania, that city had a telegraph-office and hotel, costing the owner $10,000. In one month more there was a daily paper established, and in the next a theatre; in another month another theatre, and then an academy of music. In six months there were seventy-four hotels and boarding-houses; in the seventh month the city had reached its highest prosperity. It then had about 15,000 people, elaborate waterworks, a city hall, and an expensive city government. Then occurred the completion of labour-saving enterprise—the so-called Miller Farm Pipe line, —by which the petroleum was sent off independent of the labouring population. At once 4,000 persons were thrown out of employment, while 2,000 houses became useless. This was the death-blow to Pithole. At once the hotels, the theatres, and the telegraph-office were closed, and the daily paper gave up its ghost, while almost every one packed up his trunk and moved out. Only nine families remain out of a population of 15,000 souls, while the railroad from Pithole and Oleopolis runs only one train a day, consisting of a locomotive and a single car, which is usually empty; but the company is obliged to keep running, otherwise the charter for the road would be lost. They still hope against hope for better times for that unfortunate city, which in only seven months was born, full-grown, got sick, and died. Undoubtedly this is a case unparalleled in history, modern or ancient. Neither Egypt nor Greece can give examples of such rapid changes.—*Boston Journal.*

The Duke of Westminster on the Rebuilding of Eaton Hall.—At the close of the rejoicings on the coming of age of Earl Grosvenor, the whole of the workmen employed by Messrs. Smith in the rebuilding of Eaton Hall, numbering about 250, with their wives and little ones, making altogether about 450, were entertained to dinner and tea. Before the former repast was served an illuminated address was presented by Mr. Papps, the foreman, on behalf of the men, to Earl Grosvenor, who made a suitable reply. At dinner, in reply to the toast, "The Duke and Duchess of Westminster," his Grace said, after thanking the company:—You were kind enough to say in the address that you hoped we might long enjoy the mansion, which, by your skilled hands, is now built. Some may have the opinion that it is very much too large for any two people, but I would remark that we have an increasing family; and above and beyond this Eaton Hall happens to be a show place, where many people—our American cousins, for instance, who having seen the old town of Chester—come to Eaton to see something new, and I think we ought to be able to show them a house worthy of a member of the aristocracy of the great country. It is not for me to say a word against what was here before, but I think we shall have reason to be proud of the work of Mr. Waterhouse (architect), and the work of the skilled hands who are carrying out his designs. I only mention that as a sort of excuse that, though it may be too large for any two people—that, however large the family may be—still it is a house which contributes to the enjoyment of a great many people who come to see it and to walk about the gardens.

Memorial of the late Rev. R. J. F. Thomas.—The late Vicar of Yeovil was one of the most valued members of the Yeovil Lodge of Freemasons. Brother Shout, of Yeovil and Horsington, architect, gratuitously prepared a design for an altar-tomb to be erected over his vault in the cemetery, and the work was entrusted to Mr. Swatridge, marble mason, of Yeovil. The brethren also resolved to fix a monumental brass, appropriately inscribed, in St. John's Church, and Messrs. Petter & Edgar, ironfounders, of Yeovil, were commissioned to carry out this portion of the work. The tomb has recently been unveiled. It consists of a block of Pennant stone, on the south side of the cemetery, near the chapels. It is 7 ft. long by 2 ft. 6 in. wide, exclusive of the plinth and platform of the same stone, raising the whole to the height of about 3 ft. The plan of the tomb may be described as cruciform; but this is disguised in outline by the contour of the centre-piece, carved in circular compartments at sides, on each of which appears, in *alto relievo*, the jewel of the Provincial Grand Chaplain of Somerset, the rank of the deceased. This centre-piece is slightly elevated above the coped top of the tomb, and takes an octagonal form, containing in a circle a carved representation of a jewel of a Past Master, with the date of his exaltation and number of his Lodge. Each end of the tomb is carved with the symbol known as the "Triple Tau." The tomb is surrounded by iron railing about 18 in. high, each pillar ornamented with the square and compasses. The railings were also supplied by Messrs. Petter & Edgar.

The Proposed Waterworks for Doncaster.—According to the plans and specifications, which have been on view at the local Mansion-house, it appears that, briefly speaking, the proposed waterworks will consist of one large and principal, and two smaller and subsidiary reservoirs, a conduit or line of pipes passing from that situated at the most easterly point on the north side of the smaller reservoir, and then onwards through Ravenfield Park and Gold Wood to the principal and largest reservoir. From this latter reservoir an iron pipe will be laid to convey the water to Doncaster. On the west side of the main reservoir there will be a sewer to intercept the drainage from Thrybergh. The two smaller reservoirs will be connected by a culvert: there will be an outlet culvert and valve well; and a flood channel which will connect the reservoirs with the overflow weir. All the reservoirs will be situated in the parish of Ravenfield. The main reservoir will be placed in the Silver Wood Valley, and will tap the Silver Wood brook. All the work is to be completed by the 1st of January, 1877, otherwise the contractor will be liable to a forfeit of 50*l.* for each day that the work is prolonged beyond that time.

Fatal Accident at Bombay.—On the 2nd of August, says the *Times of India*, a lamentable accident occurred, by which the Hon. Narayen Wassodeo, a member of the Legislative Council of the Governor of Bombay, lost his life. It appears that the pillars supporting a large hall, and forming a portico in front of the house, were observed to be in an unsafe condition on the night previous. Arrangements were being made for their repair, and the native workman who had examined them thought that there was no immediate danger to be apprehended. While he and Mr. Narayen and several others were standing talking under the portico large pieces of plaster commenced to crumble off from the tops of the pillars. As they were proceeding up the stairs into the hall above, the whole of the front part of the building fell in with a tremendous crash, burying six persons beneath its ruins. The neighbours rendered immediate assistance, and all, with the exception of Mr. Narayen and the native mason, were taken out more or less injured. After a search of two hours amongst the ruins, Mr. Narayen's body was found buried several feet deep under beams and plaster. He was quite dead.

Inauguration of the Meter System on Public Lamps in St. Pancras.—The ceremony of attaching the first meter to public lamps in St. Pancras, under the average meter system, has taken place at the lamp opposite No. 1, Osnaburgh-terrace, Euston-road. The ceremony was performed by Mr. T. B. Westacott, chairman of the lighting committee, and amongst those present were Mr. Parkinson, the contractor, and Mr. Clutterbuck, gas engineer and inspector of lighting.

Geographical Gardens.—A suggestive idea is proposed by Mr. Augustus J. Harvey, that a people's geographical garden, designed and laid out by scientific men, and combining instruction with amusement, should exist in every city and large town in the United Kingdom, for the popular and practical teaching of physical geography, either side by side with maps, atlases, and charts, or in complete and entire substitution of them. To show rough and sensible elevation, it should cover several acres of ground, according to any scale in inches and feet. It is compared to "a gigantic horizontal relief map, mapped or massed out into geographical shape, impervious to weather, and possibly moulded out of concrete, &c., but covered with vegetation; or a vast model of the entire surface of our globe [as Wild's globe was in idea, though not the same as worked out], and showing to sight and touch all its chief physical features, spread out, as it were, like a miniature panorama, upon which we can stand and walk about, with no pretentions to perfect scientific and geometrical accuracy, but simply sensible rough approximations, every square foot having its special geographical interest and importance."

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precautions, however, there was a slight settlement. The architect was consulted, and he gave it as his opinion that the stability of the tower was not in the least impaired by the operations connected with the drainage near the church. The money required for the bells still remains to be raised. Of the three churches in the town not one possesses more than a solitary bell. The new church is intended to be a chapel of ease to the mother church.

Bromsgrove.—The new church of All Saints, Bromsgrove, the foundation-stone of which was laid about twelve months since, has been consecrated and opened for public service by the Bishop of Worcester. The building is erected at the north end of the town, near the Workhouse. It may be stated to owe its origin to the late son-in-law of the vicar of Bromsgrove (the Rev. W. M. Molyneux), who, some time before his death, offered the sum of 500*l.* towards the object. The money was willed to the bishop under certain restrictions, and, added to a similar amount given by his lordship, formed the nucleus of a fund for completing the work. The church comprises nave with aisles, chancel with apsidal end, and organ-chamber on the north side, vestries for the clergy and choir on the south side, a baptistery formed at the north-west angle of the nave and aisles, in the lower portion of the tower, which rises at this part of the building, but which is as yet only partly erected, owing to limited funds. The principal entrance is at the west end, under a traceried west window. The style is Geometrical Gothic, after the type prevailing in the transitional period at the end of the thirteenth century. The detail is of simple character, and the architect appears to have studied effect in the work. The easternmost bay of the aisles on each side being projected and buttressed after the manner of transepts, breaks up the monotony of the roofing and elevation, and gives the edifice a cruciform appearance. The building is generally executed with the local sandstone, which has for centuries held a reputation as a sound building material, and of which the ancient parish church of St. John is built; but Box Bath stone is introduced in the tracing and portions of the moulded work throughout the building. Grey tinted stone is used for external walling, but a combination of light red and grey tinted stones is introduced in the moulded arches and piers of the nave and interior generally, which is lined throughout with yellow or buff-coloured pressed bricks, relieved by pattern brickwork, bandings, and crosses worked in red and light blue bricks, in the spandrels of the arches, &c. The roof is open-timbered. A lofty arch is thrown across the nave where the transepts occur. Open rose lights are also inserted in the clearstory wall, over the transept arches. The roof is covered with brindled Broseley plain tiles, with red ridge cresting. The windows are glazed with cathedral-tinted rough-rolled plate glass, in lead quarry lights. The chancel is paved with encaustic tiles, and the body of the church with blue and red quarry tiles, arranged in patterns. The building will accommodate 620 persons in the nave and choir. The building contract was completed by the autumn of 1873, since which time the church has awaited consecration. The contract was, after competition, undertaken by Mr. A. Estcourt (O. Estcourt & Co.), of Gloucester, whose tender was the lowest sent in, and who has executed the work, at a cost of 4,458*l.* 9s. 2d. Some portion of the carving had been executed by Mr. Roddis, of Birmingham, although the main portion remains to be done. The church will be heated by a hot-air apparatus, by Blake & Co. of Coventry. The architect, from whose designs and under whose direction the church and the various works connected with it were executed, is Mr. John Cotton, of Birmingham.

DISSENTING CHURCH-BUILDING NEWS.

Bolton.—The first of a series of opening services has taken place in the new Wesleyan Chapel. The whole cost, including the ground, is 2,300*l.*, which is more than was first estimated. The buildings are erected on a site given by the late Mr. James Rhodes, adjoining the highway and near the junction with the Idle-road. The basement, which, owing to the fall of the ground, is unusually light and airy, is devoted to school purposes, and the ground-floor forms the chapel, approached from Bolton-road by a flight of eight steps. The dimensions of the chapel internally are 67 ft. by 32 ft., and 27 ft. high to the ceiling. It is seated with open benches of pitch pine, and having low and sloping backs, and without doors. A gallery similarly seated is formed over the entrance-lobby, together affording accommodation for 340 persons. The windows are finished internally with plaster architraves and imposts mouldings, filled with ground glass pink borders. The whole of the joiner's work is of pitch pine. There is a minister's vestry with private entrance on the ground floor, and in the basement a large schoolroom with windows on three sides is provided, together with two vestries and a room for heating apparatus. Externally the building is of simple character, Italian in style. The walling generally is pitch-faced, and the open porch of the principal entrance is entirely of boasted ashlar. The work has been carried out, at a cost of about 2,200*l.*, by the following contractors:—Messrs. Kitchen & Rhodes, masons; James Naylor, joiner; Walsh & Son, plumbers; James Firth, plasterer; and — Thornton, slater. The architects are Messrs. T. H. & F. Healey, of Bradford.

Birtenshaw (Bolton).—The memorial stone of a new Wesleyan Chapel has been laid at Birtenshaw, Toppings, Turton. The site is on the north side of the road leading from Bramley Cross to Egerton. The chapel, which will be in the Gothic style, will be set back from the road about ten yards, and the ground rises from the road. The buildings, according to the plans, comprise a chapel, 57 ft. 6 in. long, and 35 ft. wide inside; and at the back, or north side, a minister's vestry, and choir vestry over the same, having externally the appearance of a chancel. The principal entrance will be at the front, opening into a vestibule, 7 ft. 6 in. wide, and extending in length the full width of the chapel, having folding doors therein, also stairs on each side (for boys and girls respectively) leading up to the scholars' gallery, which will be formed over the vestibule and project slightly into the chapel. The walls will be of brick above the stone foundations now already put in; the front and two side elevations will be faced with patent pressed bricks, and relieved with blue brick bands and string courses, also stone dressings. The front will be gabled. Internally the walls will be wainscoted 4 ft. high with match boarding, finished moulded capping, and above which the walls will be plastered. The height of the chapel internally will be 18 ft. to the square of side walls, and 26 ft. to the highest part of the ceiling. All the windows to the chapel will have margin squares, and be glazed with ground-glass. The margins to front windows and fan-light, also to north lights (placed on each side of orchestra) will have coloured glass. Arrangements for ventilation will be made. The chapel will comfortably seat 346 persons. The estimated cost of the building, so far as now contracted for, is 1,330*l.* This is exclusive of heating and lighting, erection of outbuildings, boundary walls, formation of grounds, &c., which, with other incidental expenses, will probably increase the cost to about 1,600*l.* The plans have been prepared by, and the works are being carried out under the superintendence of, Mr. Thomas Ormrod, architect, Bolton, and the contractor for the whole of the works now arranged for is Mr. William Townson, joiner and builder, of Bolton and Astley Bridge.

High Wycombe.—On Tuesday, the 21st ult., the foundation-stone of a new Primitive Methodist Chapel with schoolrooms, vestries, &c., at High Wycombe, Bucks, was laid by Lieut.-Col. the Hon. W. H. P. Carington, M.P. The new buildings will comprise a chapel with end and side galleries, to seat 500 adults; schoolrooms under; and in the rear three class-rooms, wash-house, stores, offices, &c. The main building is nearly 70 ft. from street to ridge. The style is thirteenth-century Gothic. The materials are of washed stock and red bricks, with stone. The fittings are in pitch pine. The total cost will be about 3,500*l.* including site. The heating apparatus is to be by Messrs. Haden & Son. The contractor is Mr. Ruben Spicer, of Wycombe; and the architect is Mr. Arthur Vernon.

Warrington.—The memorial stones of a new Wesleyan Chapel in Bewsey-road, Warrington, have been laid. The chapel, which is situated at the corner of Bewsey-road and Froghall-lane, is designed to present a good porch to both, outline and grouping of parts being depended upon rather than ornamental details. The style chosen is Early Gothic, and the bricks of the neighbourhood will be the principal material used, with courses of black bricks and bands and dressings of stone. The front to Bewsey-road is treated as the best. The large gable forming the end of the chapel will be the principal feature, and it is designed with an arcade of three arches on polished granite shafts and carved heads forming an open porch to the entrance; above this is a central group of windows under arched heads supported by stone shafts, which run down to the ground clustering with the granite columns, tied thereto by moulded stone bands, and connected therewith both by the carved capitals and moulded bases. Stone turrets rise on each side of the gable springing from the buttresses which stop each end of the arcade. The interior is arranged for about 470 persons on the ground floor and 370 in the galleries, which will run round three sides. The end opposite the entrance will have what may be called a chancel arch and apse; for although the space will be occupied by the organ and choir, this effect will be retained as much as possible. The fittings throughout are to be of pitch pine, varnished. Behind the chapel, but in direct communication therewith, will be four vestries, having entrance also from the side street, and a schoolroom which will seat 105 persons. The buildings have been designed and will be erected under the superintendence of Mr. C. O. Ellison, architect, Liverpool; and Messrs. Collin & Son, of Warrington, are the contractors for the whole. The estimated outlay, including cost of land, will be about 6,000*l.*

Haverfordwest.—The Tabernacle Chapel, which has for the last twelve months been undergoing extensive alteration and enlargement, is now re-opened for Divine worship. To a casual observer it would appear an entirely new building, and with the exception of the side-walls and the ceiling this is the case. On the plan the main part of the buildings is quadrilateral, with a projecting semicircular centre towards the front and rear. The main part of the building is 61 ft. 6 in. long, and 40 ft. wide, and divided longitudinally into nave and aisles. The front part comprises a central lobby, 14 ft. by 7 ft., and two staircase lobbies, wholly separated from each other, but entered from a semicircular portico, 18 ft. in diameter, over which is the organ-gallery. The rear part of the nave forms a projecting apse, 19 ft. in diameter, containing the pulpit platform; and to the left of this the vestry, entered from the body of the chapel. There are two side galleries and a deep end gallery approached from enclosed lobbies on either side of the building. The style of the building is Italian, freely treated; the exterior presents a façade comprising the semicircular centre and two receding wings divided into two stories or orders, the lower of which forms a rusticated stylobate, and the upper an entablature of Ionic order. The semicircular centre has three intercolumniations formed by two single and two coupled columns carried upon the surbase of the stylobate, and each intercolumniation has a square-headed window with moulded architraves, margins, and carved keystones and sill-trusses. A view of the interior shows a nave and aisles, formed by an arcading of five bays, divided by light cast-iron columns, with foliated capitals, carrying the galleries, and supporting moulded and enriched elliptic arches, with circular enriched medallions in the spandrels. The columns are connected by an ornamental cast-iron gallery-front, supported by a moulded cornice and frieze. The arcading supports a coffered and moulded ceiling, with enriched centrepieces, the ceiling over the nave being elliptic (the main portion of this ceiling is old). The ceiling of the apse is semi-domical, panelled and enriched, springing from a moulded cornice carried around, and above seven semicircular arch-headed windows, of tinted cathedral glass, with coloured borders and rosettes. The interior seats and fittings are of red fir, stained and varnished. The aisles are paved, with encaustic tile border, and the vestibules wholly with mosaic paving. Messrs. Allen, of Pembroke Dock, are the builders; Messrs. Macfarlane, of Glasgow, and Mr. Marychurch supplied the ornamental ironwork; Messrs. Messenger, of London, the gasfittings; Messrs. Maw, of Broseley, the encaustic tilework; and the architects are Messrs. Lawrence & Goodman, of Newport, Monmouthshire.

Chester.—The foundation-stone of a new Congregational Church has been laid in Upper Northgate-street. The structure is to cost 3,240*l.* Mr. T. M. Lockwood, of Chester, is the architect, and the contract for carrying out the work is undertaken by Mr. Thomas Richards, also of Chester. The building will be 72 ft. 6 in. long, and 38 ft. 6 in. wide, internally, having its main entrance from Northgate-street, through

two porches leading to the vestibule, 7 ft. in width. The height of the building will be 32 ft. 3 in. to the ceiling line inside, and about 48 ft. to the ridge. There will be a triangular space in the roof left for ventilation. The timber principals and other roof timbers are exposed below the ceiling line, and, like the other internal fittings, will be of pitch pine. Accommodation will be provided for 500 sittings, all upon the ground-floor. Externally, the front to Northgate-street consists of one gabled end, with large five-light lancet window, having broad mullions and detached shafts of red Mansfield stone, with carved caps and bases. On the north side of the gable is a square tower, which, at the height of 42 ft. from the ground, becomes octagonal in form. It is pierced by eight belfry lights, and terminates in a spire and vane, reaching the height of 100 ft. The front of the building, the tower, spire, and portions of the sides will be faced with Storeton Hill stone. The general style of the edifice will be Gothic of the thirteenth century.

Miscellanea.

A Short Life.—Within one month from the completion of the first house in Pithole city, Pennsylvania, that city had a telegraph-office and hotel, costing the owner $10,000. In one month more there was a daily paper established, and in the next a theatre; in another month another theatre, and then an academy of music. In six months there were seventy-four hotels and boarding-houses; in the seventh month the city had reached its highest prosperity. It then had about 15,000 people, elaborate waterworks, a city hall, and an expensive city government. Then occurred the completion of labour-saving enterprise—the so-called Miller Farm Pipe line,—by which the petroleum was sent off independent of the labouring population. At once 4,000 persons were thrown out of employment, while 2,000 houses became useless. This was the death-blow to Pithole. At once the hotels, the theatres, and the telegraph-office were closed, and the daily paper gave up its ghost, while almost every one packed up his trunk and moved out. Only nine families remain out of a population of 15,000 souls, while the railroad from Pithole and Oleopolis runs only one train a day, consisting of a locomotive and a single car, which is usually empty; but the company is obliged to keep running, otherwise the charter for the road would be lost. They still hope against hope for better times for that unfortunate city, which in only seven months was born, full-grown, got sick, and died. Undoubtedly this is a case unparalleled in history, modern or ancient. Neither Egypt nor Greece can give examples of such rapid changes.—*Boston Journal.*

The Duke of Westminster on the Rebuilding of Eaton Hall.—At the close of the rejoicings on the coming of age of Earl Grosvenor, the whole of the workmen employed by Messrs. Smith in the rebuilding of Eaton Hall, numbering about 250, with their wives and little ones, making altogether about 450, were entertained to dinner and tea. Before the former repast was served an illuminated address was presented by Mr. Papps, the foreman, on behalf of the men, to Earl Grosvenor, who made a suitable reply. At dinner, in reply to the toast, "The Duke and Duchess of Westminster," his Grace said, after thanking the company:—You were kind enough to say in the address that you hoped we might long enjoy the mansion, which, by your skilled hands, is now built. Some may have the opinion that it is very much too large for any two people, but I would remark that we have an increasing family; and above and beyond this Eaton Hall happens to be a show place, where many people—our American cousins, for instance, who having seen the old town of Chester—come to Eaton to see something new, and I think we ought to be able to show them a house worthy of a member of the aristocracy of the great country. It is not for me to say a word against what was here before, but I think we shall have reason to be proud of the work of Mr. Waterhouse (architect), and the work of the skilled hands who are carrying out his designs. I only mention that as a sort of excuse that, though it may be too large for any two people—that, however large the family may be—still it is a house which contributes to the enjoyment of a great many people who come to see it and to walk about the gardens.

Memorial of the late Rev. R. J. F. Thomas.—The late Vicar of Yeovil was one of the most valued members of the Yeovil Lodge of Freemasons. Brother Shout, of Yeovil and Horsington, architect, gratuitously prepared a design for an altar-tomb to be erected over his vault in the cemetery, and the work was entrusted to Mr. Swatridge, marble mason, of Yeovil. The brethren also resolved to fix a monumental brass, appropriately inscribed, in St. John's Church, and Messrs. Petter & Edgar, ironfounders, of Yeovil, were commissioned to carry out this portion of the work. The tomb has recently been unveiled. It consists of a block of Pennant stone, on the south side of the cemetery, near the chapels. It is 7 ft. long by 2 ft. 6 in. wide, exclusive of the plinth and platform of the same stone, raising the whole to the height of about 3 ft. The plan of the tomb may be described as cruciform; but this is disguised in outline by the contour of the centre-piece, carved in circular compartments at sides, on each of which appears, *in alto relievo*, the jewel of the Provincial Grand Chaplain of Somerset, the rank of the deceased. This centre-piece is slightly elevated above the coped top of the tomb, and takes an octagonal form, containing in a circle a carved representation of a jewel of a Past Master, with the date of his exaltation and number of his Lodge. Each end of the tomb is carved with the symbol known as the "Triple Tau." The tomb is surrounded by iron railing about 18 in. high, each pillar ornamented with the square and compasses. The railings were also supplied by Messrs. Petter & Edgar.

The Proposed Waterworks for Doncaster.—According to the plans and specifications, which have been on view at the local Mansion-house, it appears that, briefly speaking, the proposed waterworks will consist of one large and principal, and two smaller and subsidiary reservoirs, a conduit or line of pipes passing from that situated at the most easterly point on the north side of the smaller reservoir, and then onwards through Ravenfield Park and Gold Wood to the principal and largest reservoir. From this latter reservoir an iron pipe will be laid to convey the water to Doncaster. On the west side of the main reservoir there will be a sewer to intercept the drainage from Thrybergh. The two smaller reservoirs will be connected by a culvert: there will be an outlet culvert and valve well; and a flood channel which will connect the reservoirs with the overflow weir. All the reservoirs will be situated in the parish of Ravenfield. The main reservoir will be placed in the Silver Wood Valley, and will tap the Silver Wood brook. All the work is to be completed by the 1st of January, 1877, otherwise the contractor will be liable to a forfeit of 50*l.* for each day that the work is prolonged beyond that time.

Fatal Accident at Bombay.—On the 2nd of August, says the *Times of India*, a lamentable accident occurred, by which the Hon. Narayen Wassodeo, a member of the Legislative Council of the Governor of Bombay, lost his life. It appears that the pillars supporting a large hall, and forming a portico in front of the house, were observed to be in an unsafe condition on the night previous. Arrangements were being made for their repair, and the native workman who had examined them thought that there was no immediate danger to be apprehended. While he and Mr. Narayen and several others were standing talking under the portico large pieces of plaster commenced to crumble off from the tops of the pillars. As they were proceeding up the stairs into the hall above, the whole of the front part of the building fell in with a tremendous crash, burying six persons beneath its ruins. The neighbours rendered immediate assistance, and all, with the exception of Mr. Narayen and the native mason, were taken out more or less injured. After a search of two hours amongst the ruins, Mr. Narayen's body was found buried several feet deep under beams and plaster. He was quite dead.

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The Late Mrs. Alfred Gatty.—A memorial of the late Mrs. Alfred Gatty ("Aunt Judy") has been received at Ecclesfield, the result of Lady Warrender's suggestion of a sixpenny subscription by the young readers of the magazine. The sum of 38*l.* 5*s.* 3*d.* was quickly contributed. The design was presented by Mr. William White, architect, a friend of Mrs. Gatty's family. It is in the form of a panel of Forest of Dean stone, which rises to a point, and is edged with a line of dark reddish marble. In the recess are emblems, executed in fine statuary marble—a triangle, a cross, palm branches, a crown, and a star. The panel behind is diapered in gold. Below is the inscription, in gilt lettering. The pedestal which supports the tablet is of Caen stone, and represents the upper portion of an angel. The work was executed by Mr. Faulkner, of Exeter, and will be fixed into the wall in Ecclesfield parish church. The whole tablet measures about 3½ ft. by 1 ft. 10 in.

New Floating Baths on the Thames.—The new floating bath on the Thames, which, by the sanction of the Thames Conservancy and the Metropolitan Board of Works, will be moored in the place now occupied by one of the landing-stages at Hungerford Bridge, is on the point of completion. The bath is built of corrugated iron and glass, with a lofty dome at each end. The entire length is 180 ft. by 31 ft. The bath itself affords a swimming area of 135 ft. by 25 ft., is paved with encaustic tiles, filled at each end with huge filters capable of purifying Thames water at the rate of 1,000 gallons per minute, and flanked on both sides by dressing-rooms, hot baths, &c. At certain hours the bath will be set apart for ladies. During the winter months a stream of hot water will pass through the bath to regulate the temperature. A second bath for Pimlico, to be moored opposite Pimlico-pier, 260 ft. by 47 ft., and having a swimming area of 200 ft. by 40 ft., will also shortly be commenced.

St. George's Hospital.—The alterations in St. George's Hospital, which has been entirely closed to the public since the 31st of May last, are now completed. The entire building has been cleansed and repainted, the wards re-organised, and the walls stripped and repapered. A new heating apparatus, specially designed so as to maintain an equality in temperature, has taken the place of the original machinery. The sanitary arrangements are said to have received attention; the drains, closets, sinks, &c., throughout the whole building have been taken up and relaid afresh. The original contract, which was for 5,000*l.*, has been considerably exceeded.

Doncaster Water Works.—The Doncaster Corporation has held a special meeting for the purpose of receiving tenders for the construction of reservoirs and other undertakings in connexion with the new water works for the town. A committee reported that four tenders in all had been received, namely:—Messrs. Logan & Hemingway, Rotherham, 56,183*l.*; Mr. Richard Broomes, Clapton, 55,300*l.*; Messrs. N. B. Fogg & Co., Bradford, 47,010*l.*; and Mr. James Thane, Thaneville, Maryport, 42,538*l.* The engineer, Mr. B. S. Brundell, C.E., had made inquiries, and Mr. Thane's tender was accepted by the Council.

Fall of a Building.—At Cambridge, on Monday morning, four workmen engaged in pulling down the Old Master's Lodge, Pembroke College, narrowly escaped a terrible death. The gable had fallen, which shook the whole building, when the second and top floors fell with the men who were at work on the highest part. Two of them escaped unhurt; the others, Harvey and Stubbings, were buried beneath four or five tons of *débris* for half an hour, when they were extricated, and conveyed to Addenbrough Hospital. Harvey is severely bruised. Stubbings, besides other injuries, had his collar-bone fractured.

The Monument to the late Lord Galloway at Newton-Stewart.—The Countess Dowager of Galloway has intimated to the committee that she prefers the design of Mr. Park, architect, Newton-Stewart, for the proposed monument. It is 57 ft. high, Gothic, and very ornamental. In addition to a medallion portrait of his lordship and the family coat of arms, it has four rampant lions, bearing shields at each corner, and is surmounted by a very graceful cross. As the committee will, of course, give effect to her ladyship's preference, the work will be begun at once.—*Edinburgh Courant.*

Gosforth Park, Newcastle-on-Tyne.—Practical operations on this extensive building estate are about to be inaugurated by the chairman of the proprietary company. The working plans of the estate, which have been prepared by Mr. Thomas Parker, architect, Newcastle, show a provision of sites for every variety of house, from the moderate-sized plots for cottages to plots for villa residences, of a few acres in extent, thus affording every facility to the business-men of Newcastle to plant their dwellings "out in the clear," and that without the serious drawback of a long daily journey. A portion of the estate has already been leased to a builder for brick works, and brickmaking machinery is now in the course of erection. There are special stone-quarries in the immediate vicinity of the ground.

New Church in Brixton.—A new church has just been commenced in the parish of Brixton. The building is designed in the early Gothic style, and consists of nave and aisles, chancel, organ-chambers, vestry, north and south porches, and a tower and spire at the north-west angle. It has a lofty clearstory, divided by an arcade of arches. The accommodation is for 1,000 persons on the ground floor. The church is to be faced with Kentish-rag and Bath-stone dressings, and green slates are to be used for the roof. Mr. E. C. Robins is the architect, and the amount of the contract, exclusive of the upper portion of the tower and spire, is 6,712*l.*

Laying the Foundation-stone of St. Andrew's Hall, Southport.—The foundation-stone of a new hall, which is to be erected in connexion with St. Andrew's Church, Southport, has been laid by the Mayor of Southport, in the presence of a large number of people. The hall is designed so that it may be used as a Sunday school, reading-room, class-rooms, and for lectures, public meetings, and a parochial public library. For large meetings the area available will be 70 ft. by 40 ft. Behind the hall will be a committee-room, ladies' cloakroom, &c. The erection of the building will cost about 1,000*l.*

Proposed Cottage Hospital for Basingstoke.—The proposal to establish a Cottage Hospital for this neighbourhood is likely soon to be carried into effect. A site has been granted by the Corporation, on lease for ninety-nine years, at a nominal rent. A subscription list has been opened, and nearly 600*l.* have already been promised. The medical men resident within the district of the Basingstoke Union have consented to give their services. The hospital is intended to have two wards, with four beds in each, but will not be available for cases of an infectious or contagious character.

Northumberland House.—The catalogues are out for the sale of the first portion of the building materials, fittings, &c., of Northumberland House, Charing-cross. The items comprise 3,000,000 bricks, marble chimney-pieces, the great marble staircase, of which we published a view not long ago, and a portion of the artistic decorations of the State apartments. These will be sold by auction, by Messrs. Horne, Eversfield, & Co., on September 8th and two following days. The remaining portion, comprising the Strand front, will be sold on Tuesday, November 10th.

Warwick Castle.—Great progress is being made with the restoration of Warwick Castle. All the destroyed apartments have been rebuilt in a substantial manner, but the work of ornamentation will require considerable additional time for its completion. Workmen are busily engaged in laying the marble floor of the Baronial Hall, twenty tons of white and red marble having been obtained from Italy for the purpose. Much of the armour damaged by the fire has been restored, and will again serve to decorate the walls.

Close of the International Exhibition at Kensington.—To induce artizans and others to visit the Exhibition for the purpose of gaining technical instruction, the charge of admission has been reduced to 3d. each person, on Mondays, Tuesdays, and Saturdays, being the free days at the South Kensington Museum. The Exhibition will close on the 31st of October.

"City United Club."—The premises which have been secured by the committee of this Club form part of Ludgate-circus, with a fine frontage in New Bridge-street, and adjoin the London, Chatham, and Dover Railway Station. The building has been erected expressly for a Club, and contains upwards of seventy rooms.

A Home for Printers.—The Philadelphia *Public Ledger* says:—Mr. J. G. Cooley, of Middle Hill Farm, Connecticut, proposes to turn over the whole of his property, consisting of a well-stocked farm of 150 acres, to his fellow printers who in old age desire to secure a peaceful home at the price of moderate labour. Neither the idle nor the sick will be admitted. Mr. Cooley began life as a printer, and made a fortune in New York by manufacturing wooden types for large job work.

The Autumn Exhibition of the Birmingham Royal Society of Artists.—This exhibition has been opened. There is a collection of 673 art-works of varied character and merits. The local *Daily Post* speaks favourably of it as an advance upon most of its predecessors, the average standard of merit being more than usually high, and the interest well distributed. On the private-view day something like 2,000*l.* worth of the pictures were sold.

The Thames Embankment.—An influential meeting of parishioners and others residing in the precincts of St. Bride's and Whitefriars has been taking steps for the purpose of opening an approach from Fleet-street to the Victoria Embankment. It was decided that a memorial be presented to the Metropolitan Board of Works, praying them to open up a new road from Whitefriars-street over the site of the Whitefriars-dock to the Embankment.

The Projected New Theatre for Worcester.—The capital of the company, formed for the purchase of the old and the erection of a new theatre, has been all taken up. The Earl of Dudley has put down his name for a hundred 10*l.* shares. The directors have issued advertisements for tenders for the new works proposed to be constructed.

TENDERS

For the erection of a lecture-hall, &c., at the Congregational Church, Southernhay, Exeter. Messrs. John Tarring & Son, architects:—

Tozer	£1,184 16 0
Luscombe	1,047 0 0
Smith	1,035 0 0
Beadding	939 0 0

For alterations and additions to offices of "Reuter's Telegram Company," Old Jewry. Mr. H. H. Collins, architect:—

Vernall	£1,675 0 0
Oliver	1,625 0 0
Minchin	1,150 0 0
Moreland & Nixon	970 0 0

For Soldiers' Home, Bank-street, Aldershott, for Trustees of the Wesleyan Church, Aldershott. Mr. W. W. Pocock, architect. Quantities supplied:—

Hobson	£3,339 0 0
Niblett	3,300 0 0
Goddard	3,225 0 0
Mantell & Wells	2,991 0 0
Garland & Kemp	2,800 0 0

For alterations to premises, Leather-market, Bermondsey, for Messrs. Hepburn & Sons. Mr. J. Gale, architect:—

Laschelles	£897 0 0
Colls & Sons	890 0 0
Tarrant	884 0 0

For alterations and additions to the offices of Board of Works, St. Giles. Mr. W. J. Trehearne, architect:—

Colls & Son	£789 0 0
Charlton & Martin	746 0 0
Crockett	700 0 0
Brecknell	697 0 0

For Congregational Mission Church, New Eltham, Kent. Mr. W. Ranger, architect:—

Haisman	£727 0 0
Deacon	647 0 0
Booker (accepted)	550 0 0

For new Wesleyan Chapel, Langtoft, near Driffield, Yorkshire. Mr. W. Ranger, architect:—

Mainprize (accepted)	£820 0 0

For alterations and additions to Wesleyan Chapel, Higham Ferrers, Northamptonshire. Mr. W. Ranger, architect:—

Hall (accepted)	£900 0 0

For rebuilding No. 10, Ship-street-gardens, Brighton, for Mr. Vaughan. Mr. G. Tuppen, surveyor:—

Nash & Co.	£645 0 0
Lockyer	632 0 0
Patching & Webber	620 0 0
W. & J. Garrett	574 0 0
Barnes (accepted)	524 0 0

For building four cottages at Beckenham, Kent, for Mr. H. Nicholl. Mr. Alex. R. Stenning, architect:—

Crossley	£1,050 0 0
Hooker	1,035 0 0
Burrows & Brooker	909 0 0
Lee (accepted)	820 0 0